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PLATE XVII.

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ILLUSTRATIONS

OF

PHRENOLOGY.

WITH ENGRAVINGS.

BY

SIR G. S. MACKENZIE, BART.

F. R. S. LOND. P. PH. CL. R. S. ED. V.P. S. S. A.

PRESIDENT OF THE ASTRONOMICAL INSTITUTION OF EDINBURGH; HONORARY MEMBER OF THE ROYAL COMMISSION FOR ANTIQUITIES, AND OF THE ICELANDIC LITERARY SOCIETY AT COPENHAGEN; OF THE HELVETIC PHILOSOPHICAL SOCIETY; OF THE MINERALOGICAL SOCIETY OF DRESDEN; AND OF THE NATURAL HISTORY SOCIETY OF WETTERAU.

The most effectual method to check the Empiricism either of Art or of Science, is to multiply, as far as possible, the number of those who can observe and judge. ALISON.

EDINBURGH:
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1820.

TO

J. G. SPURZHEIM, M. D.

Of Phrenology, a writer in a periodical Work, published in Edinburgh, and who does not profess to be a convert to it, thus speaks:

"It is a distinguishing feature of the new system, that it generates and cherishes a spirit of charity in all our judgments upon others. It places in the most striking light, the defects of our nature, and the temptations to which we are exposed from our own evil propensities. And yet as it teaches, at the same time, that our higher faculties have, when duly cultivated, a governing and increasing power over the lower propensities and sentiments, it does not do away with personal responsibility. The best, under this system will

not be able to preserve themselves free of blame, nor will the worst escape the penalties attached to their crimes. Had its tendency been to give impunity to vice, or had it lent, when properly understood, any countenance to the doctrine of Materiality, we should never have brought it under the notice of our readers."

I cannot more properly inscribe the endeavours of a Convert, to assist in the dissemination of a system, the beneficial effects of which have been estimated so highly, than to Him who has, by the efforts of a powerful mind, and by the greatest personal exertions, given to it the Philosophical character which it now bears, and which it will most assuredly maintain.

G. S. MACKENZIE.

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ILLUSTRATIONS

OF

PHRENOLOGY.

To study with advantage the Science of Phrenology, it is peculiarly necessary to understand precisely its objects, which have been very generally mistaken and misrepresented. Though the human body is subject to the cognizance of our senses, and of consciousness, we are entirely ignorant of its nature. We see certain forms and combinations of matter; but of the principles of vitality and organization, or the

efficient causes of these forms and combinations, we know nothing. We know only the properties of substances, and even these but to a limited extent. Chemistry, paradoxical as the observation may appear, is daily adding to the proofs of our ignorance of the nature of Matter; for we can see no end to the changes of appearance and properties which various forms of matter are susceptible of undergoing in the hands of the Chemist. There are material substances, of the existence of which we are satisfied, which seem almost to lose the character of Materiality, and, eluding in a great measure our investigation, forcibly remind us of the narrow limits by which the human understanding is circumscribed: such are Heat, Light, Magnetism, Electricity, and Sound. Phrenology does not profess to teach any thing regarding the nature of Matter; and still less concerning the nature of Mind.

Heat combining with Ice, produces the compound called Water; but when we wish to investigate the properties of water, we do not, as the best means of arriving at a knowledge of the compound, study ice and heat separately. In like manner, Man is a compound of Mind and Body; and in his present state of existence, these component parts are so closely connected, that the whole phenomena of life are the result of their united action. It is incorrect, therefore, to found a system of the Philosophy of Man on one part only of his constitution. In Phrenology, the phenomena of Mind are studied, as manifested through the medium of material organs; and the influence of the organs upon the manifestations, is an important object of its investigation.

As Phrenology has been supposed to favour Materialism, its doctrines have been denounced as dangerous. Phrenologists

consider Materialism, not as dangerous, but as unphilosophical, and unimportant. Materialists, being charged by the injudicious zeal of some of their opponents with dangerous heresy, have been induced to maintain their peculiar dogmas, with all the pertinacity of a persecuted sect. Phrenology shews that the question is really of no consequence whatever. According to the view which it gives of the Human Mind, the faculties are innate, and have a specific constitution. Now, the faculties perform their functions according to that constitution; that is, the Moral Faculties give sentiments of Benevolence, Veneration, Justice; and the Reflecting Faculties give Understanding, precisely in the same manner, whether we believe the mind, in which these faculties exist, to be material or spiritual. The basis of Morality is the innate power of distinguishing Right from Wrong, Truth from Error: This power is im-

pressed upon the mind by the CREATOR; and is entirely independent of any speculative opinion concerning the nature or constitution of either Mind or Body. A Materialist, when he denies a future state of existence, may be refuted by a demonstration that his premises do not warrant his conclusion; because we know nothing whatever of the essence either of Body or of Mind, and of course are not entitled to infer, even from his own premises, that consciousness cannot be re-established by a re-union of the same objects that are separated by death. Besides, even allowing the doctrines of Materialism to be true, Phrenology, by proving that Man possesses moral faculties of which the lower animals are destitute, and proving that these faculties have corresponding organs, preserves Man from being degraded to the level of the brutes, and shews that Morality has a foundation independent of a belief of a future

state of reward and punishment, although, no doubt, its exercise is greatly strengthened and promoted by that most natural and philosophical belief. Of course, the materialist, even on his own principles, is not entitled to assail the authority of our moral sentiments; and thus the danger apprehended from such opinions is altogether imaginary.

The rapidity with which the various systems of the Philosophy of the Human Mind have succeeded each other, may be regarded as a proof, not only that these systems were unsatisfactory, but that the method usually followed in studying the mind has been erroneous. Mind has been studied as if it were totally unconnected with its corporeal habitation, and independent of it; and philosophers have all along, either been blind to the numerous proofs with which daily experience furnishes us, of the close and intimate connection be-

tween mind and matter, or have turned from the consideration of a connection for which they found it difficult to account. They have believed and asserted, that education, study, and habit, are capable of rendering every man equal to his neighbour in mental power; and that diversity in talents and genius is determined, solely by the degree of attention which different individuals may have bestowed on different departments of knowledge and study. Although the adage *Poëta nascitur, non fit*, shews clearly that men have believed that something else than education, study, or habit, was necessary to give to an individual the powers of a Poet, no attention was given to a fact so notorious, nor was any attempt made to account for this, nor for many other facts in the human constitution, equally apparent and equally remarkable. It is evident, that Philosophers may go on for ever erecting one sys-

tem on the ruins of another, while they neglect to consider with proper attention the intimate union of Mind and Body. Let us not be understood, however, as willing to maintain, that attention to the structure of the body and to its various functions, can ever lead to an accurate knowledge of the nature of Mind, or of the manner in which Mind and Body are united. We can have no doubt of the existence of both, as distinct component parts of Man, and that the connection betwixt mind and body subsists during life; and all that we can attempt is, to observe whether the manifestations of mind, as exhibited by external actions, or by the trains of thought that pass within us, are influenced by any part of the organization of the body, in respect to their existence, and to their energy.

"Man," says Dr Spurzheim, "is a being "of creation; and, therefore, the study of

" his nature requires the same method as " the examination of every other natural " being. Now, every class of living be- " ings presents two parts for investigation; " the bodily structure, which is the object " of Anatomy; and the functions, which " are the objects of Physiology. Thus, " it is necessary to study in man, 1*st*, " The structure of the whole body, and " that of each part in particular; 2*d*, The " Functions in general, and of every part " in particular; 3*d*, The mutual influence " of the different parts and of their func- " tions; and, 4*th*, The relations between " man and all the beings around him, " whether animate or inanimate, even the " relation to the Creator. The knowledge " of mankind may be farther divided into " the knowledge of the healthy, and into " that of the diseased state."

Dr Spurzheim divides the functions of man into two classes; 1*st*, Those which

are produced by organization alone, without consciousness,—*Automatic life;* and, *2dly*, Those which take place with consciousness, and are the effect of the Mind, but which are manifested by means of organization,—*Animal life.* The objects of the investigations of Gall and Spurzheim, are only THE MANIFESTATIONS OF THE HUMAN MIND, AND THE CONDITIONS UNDER WHICH THEY TAKE PLACE. "We "never," says Dr Spurzheim, "venture be- "yond experience; we neither deny nor "affirm any thing which cannot be veri- "fied by experiment. We neither make "researches upon the dead body alone, "nor upon the soul alone, but upon Man "as he appears in life. We consider the "faculties of the mind only so far as they "become apparent to us by the organiza- "tion. We never question what the mo- "ral and intellectual faculties may be in "themselves. We do not attempt to ex-

" plain how the body and soul are joined
" together, and exercise a mutual influ-
" ence. We do not examine what the soul
" can do without the body. Souls, so far
" as we know, may be united to bodies at
" the moment of conception or otherwise ;
" they may be different in all individuals,
" or of the same kind in every one ; they
" may be emanations from GOD, or some-
" thing essentially different. Hence, what-
" ever metaphysicians and theologians may
" decide in respect to all these points, our
" assertions concerning the manifesta-
" tions of the mind in this life, cannot be
" shaken *."

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* Should any one who knows Phrenology only from its adversaries, happen to take up this volume, he will probably consider it remarkable, that the views contained in these passages should have been overlooked, and the objects of the system so entirely misrepresented.

It is now universally admitted by Physiologists, that the Brain is the organ of the Mind. They do not, however, yet agree in considering the brain as an aggregate of a number of organs;—a fact of which every one, we think, will be satisfied, who will take the trouble to compare the developement of the brain in particular parts, with particular manifestations of mind. If the brain were a single organ, we might naturally expect that talents, and the energy of propensities and sentiments, should be in proportion to its size. But facts contradict this supposition. The brains of some animals are larger than that of man, and yet they are far behind him in sagacity and intelligence. The monkey and the dog approach nearer to man in intelligence than most of the larger animals, which have a much greater portion of brain. As it seems impossible, therefore, to measure faculties by the comparative size of the brain, we

must have recourse to other means of ascertaining the cause of the diversity. It has been imagined, that the faculties of man are determined by the size of the brain, in relation to the size of the body. Many animals, however, have brains larger in proportion to their bodies than man; and since their faculties are yet far inferior, the idea that this proportion has any effect, is plainly unfounded. Another explanation of the differences of faculties, was supposed to have been discovered in the proportion of the brain to the nerves. Cases, however, are found, contradictory of this opinion also. A remarkable circumstance is observed to be connected with the proportion of the brain to the nerves, in respect to vitality. Those animals that have the brain small in proportion to the nerves, are commonly found to be most tenacious of life, when attempts are made to kill them. They perform scarcely any functions but those

of automatic life. There are animals that are produced, and live, without heads. Human monsters have been born without brain, but having the other parts as complete and as well grown, as those of perfect infants. Dr Spurzheim has attended very carefully to this subject; and he states the result of his observations to have been, that there is neither any proportion between the nerves of the five external senses, nor between the nerves and the brain; neither is there any general rule in respect to the sexes. Sometimes one, sometimes another pair of nerves, is large or small in men or in women, and that without any relation to the brain. In the same manner, it is found, that the functions of these different parts are in no proportion, one to another. There are individuals whose senses are very weak, and who yet manifest great energy of moral sentiment and intellectual faculty, and *vice versâ*. Moreover, if the

proportional size of the brain to the nerves, were a means of measuring the faculties of the mind, these means would yet be confined to theory, and could never be applied to living persons; because there is no possibility of distinguishing the size of the nerves before the dissection of the body. Equally abortive have been the attempts to discover, in the proportions between different parts, as the spinal marrow, &c. any indication of the number or extent of the mental faculties.

It would lead too far from the purpose of this volume, to detail the manner in which Gall and Spurzheim have considered the brain, anatomically and physiologically. It is sufficient to state, that the differences observed between the degrees of energy, with which particular manifestations of mind are exhibited, have been discovered to depend on the developement and healthy state of particular portions of

the brain. The merit of this discovery is due to Dr GALL. The system of Phrenology that has been reared on this discovery, owes its philosophical character, and present improved state, chiefly to the extensive researches, ability, and perseverance of Dr SPURZHEIM. There are yet many who consider the system as nothing but a piece of quackery. But, so far as we have been able to learn, not a single individual has studied the system in all its details, without becoming a convert to its doctrines; and it has been invariably observed, that all those who have attacked the system, have been ignorant of the principles on which it is founded. Ridicule and abuse of every kind have been profusely cast upon its authors; but truth has supported them. We have heard Dr Spurzheim say, "Many men "might have sunk under the abuse that "has been lavished upon me; but I am "supported by the firm conviction, that,

" at length, though not probably till I am " mingled with the dust, our system must " prevail, because it is true *."

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* It is very difficult for any person who has studied Phrenology, to discover on what ground it could have been ridiculed, unless on that of our own ignorance of the Constitution of Man. The fact that the size of the brain has a most powerful influence on the manifestations of the mind, is so obvious, that no one, not absolutely without the powers of observation and perception, could possibly find in it a subject of mirth. A child of a year old, does not manifest mental power equal to that displayed when the head arrives at its mature size. The diminutive brain of an idiot, and that of a well-formed individual of the same age, do not correspond in the intelligence respectively exhibited through their instrumentality; but what is there in this that is absurd? The influence which the condition of the brain exerts on the manifestations of mind, is too apparent to be a subject of wonder. When the brain is affected by opium, alkohol, serous effusions, blows, or inflammation, the mental faculties are affected constantly in proportion to the disorder excited by these causes. The only

The system of Gall and Spurzheim is not yet perfect, numerous and accurate as

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proposition in Phrenology, the truth and notoriety of which is not equally apparent with the above facts is, that particular parts of the brain have particular functions;—that in the same manner as we see by means of one pair of nerves, and hear by means of another; some feel benevolence by means of one portion of the brain, and trace effects to their causes by means of another. This proposition may be true or false; but it is difficult to perceive in what respect it is absurd. As it is undeniable that a small brain, taken in the aggregate, is not equal to a large one in giving mental efficiency; and that a disordered brain is not so favourable to the manifestations of mind as a sound one; it is difficult to see the objection to the proposition, that a small organ of Benevolence is not equal in efficacy to a large one, or that a torpid organ of Causality is not so powerful as one in a state of healthy activity. It is absurd to admit the influence of size and condition in the case of the whole brain, and to find the idea of such influence affecting particular parts of it ridiculous. In short, the subject requires only to be regarded with a philosophic eye, to make it appear

the observations have been that led to its formation; and much time must yet elapse before its supporters will venture to pronounce that it requires no improvement. To accelerate its improvement, it is necessary to impart to every person of ordinary observation, the power of adding to the facts already collected, and of confirming or amending what has been already done. This we propose now to attempt in the best manner our limited knowledge of the subject will allow.

The labours of Gall and Spurzheim have been immense; but have been amply repaid by the success of their researches. They visited prisons, and hospitals for the diseased and for the insane. They examined man in all conditions, and in all situa-

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that nothing else than ignorance has directed the shafts of ridicule against the system, and not the nature and proofs of the propositions in Phrenology.

tions; and Dr Spurzheim, who is a very expert anatomist, has never neglected an opportunity of examining a brain. When he came to this country, to explain in person all that he had discovered, it happened that Physiologists were busy in the act of building up systems of their own. Some of them, afraid to look into that which might not only overset what they had already reared, but even sweep away its very foundations, chose certainly the most likely means,—not to force back a stream too powerful to be resisted, but to divert attention from its progress and operation. They gathered together a huge pile of ridicule, angry abuse, misrepresentation, and falsehood, which, for a time at least, kept the inundation of facts concealed from vulgar eyes, and from those of many learned persons who might have been inquisitive. Such a defence, however, was too frail to withstand the

mighty overflowings of Truth. It is now mouldering down; candour is overcoming the aversion to the labour of investigation; and even the enemies of the system are beginning to speak of it in the language of respect.

GALL having, from long and attentive observation, discovered that many more faculties belong to the mind than are commonly assigned to it, and that the manifestations of these, when they are remarkable, are constantly indicated by a peculiar developement of some part of the head, was naturally led to conclude, that the manifestation of each faculty depends on some particular portion of the brain, by means of which the mind is enabled to influence the body, and to produce consciousness.

They who desire to see a representation of the brain, will find delineations of it in Dr Spurzheim's work, together with an

account of his peculiar manner of dissecting it. The cavity of the skull in which the brain is contained, is shewn in Fig. 1. Plate I. of this work. It will be observed, that the outer and inner surfaces (tables) of the bone, from the fore to the back part, are nearly parallel; and, consequently, that the shape of the brain is truly indicated by that of the outer surface. It very often happens that the surfaces are not so nearly parallel to each other, as in the skull from which the plate is taken. The inner table of the bone frequently approaches the outer table, so as to make the bone thinner at some places, without any corresponding projection outwards being perceptible; but, whenever there is any considerable accumulation of brain at any particular part, the prominence becomes conspicuous; as, for example, in Fig. 2. Plate I.; and when there is any considerable protuberance, we are certain

that it is not owing to a thickening of the bone, but to an accumulation of brain. Along the line of horizontal section in Fig. 1. Plate I., it is seen that the brain has approached in some places nearer to the outer table of the skull than in others. In general, the skull is thinnest where it is covered by thick muscles; and this is not caused by the outer table approaching the inner one, but the reverse; a fact which seems at once to overset the opinions of some anatomists, who think that the action of the muscles in the act of mastication alters the shape of the head. Had this opinion been correct, we should have found the outer table pressed towards the inner one. The skull is also thinner at the base, where it is protected by the muscles of the neck.

It is a fact perfectly ascertained, that the soft parts give form to the hard. In the case of the brain, it is evident, in the ordi-

nary growth of animals, that, although the skull is entire, it expands along with the brain, till both arrive at their full size. But there are cases in which the bone yields, after having reached its ordinary size, to the accumulation of soft matter within it, occasioned by disease. I have had it in my power, through the kindness of Mr Liston, one of the ablest surgeons in Edinburgh, to give an accurate delineation of one of the most remarkable examples of this fact, that has perhaps ever occurred; and it is probable, that no specimen of equal size exists in any other cabinet than that of Mr Liston. Fig. 3. Plate VI. represents the skull of a person who died about the age of twenty-five, having from infancy laboured under the disease of water in the head. The accumulation of water was so great, that had the skull not gradually increased, and accommodated itself to the distension, it must have given way,

long before it had attained the fourth part of its present dimensions. The bone is however entire, and measures, round in the direction *a b*, 36 inches, and in that of *c d*, 42. A tolerably well developed head should measure, from the nape of the neck to the root of the nose, 15 inches; between the orifices of the ears, over the crown, 15½ inches; and, in the greatest horizontal dimensions, nearly two feet. It is true, generally, that a larger brain denotes greater capacity than a small one; but intellect and motives of action depend, for their energetic manifestations, upon the size, proportion, and state of activity of particular parts.

It cannot be too often impressed on the student of Phrenology, that it is *impossible* to know, by external signs alone, the *character* of any individual. We can only ascertain what dispositions he possesses most strongly. By long observation of his ac-

tions and conversation, we may discover whether he has subdued the lower propensities, and given due exercise to the higher faculties. We may, after a little practice, observe the kind, and also the degree of talent possessed by an individual; but it is impossible to ascertain by simple inspection, whether he has or has not misapplied his talents, or even whether his feelings and propensities be active or otherwise. By observing proportions, we may, however, judge to what conduct he is naturally prone; but we can never pretend to predict actions.

We must also keep in mind, that the functions of the brain are affected by what medical men call Temperament. Should we meet with a person who appears to have the higher faculties well developed, but who nevertheless is dull and inactive; or one who is active, but in whom they are not so conspicuous, we may be certain that

there is something in the general constitution that affects the organs, and this may sometimes be conjoined with neglected education. In short, let no one be in haste to become a physiognomist, lest he should betray ignorance, and injure the system of the truth of which he is satisfied. Let every student reflect, that no one is fond of acknowledging defects; and that few are so candid, in their pursuit of truth, as to describe their failings, even to those who are best able to account for them in a philosophical manner. Let every one refuse to gratify mere idle curiosity, and beware of uttering opinions that may offend. A Phrenologist, who deserves the name, will make his observations in silence, and without impertinent gazing. If he sees any thing remarkable, he will make inquiries in such a manner as to procure satisfaction, without giving offence, or even allowing the objects of his questions to be

known; and he will take care never to boast of his acuteness.

The legitimate objects of Phrenological Science, after it has unfolded the true philosophy of the human mind, are improvements in criminal legislation, in education, and the treatment of insanity. These are noble objects, and ought not to be pursued with levity; nor ought the studies which are requisite for attaining them, to be treated with ridicule. The benefits which Phrenology is likely, ere long, to confer on the human race, appear to be incalculably great. We may be considered as too sanguine in our hopes, and we are willing that this should be our apology for attempting to assist in multiplying the numbers of those who can observe and judge for themselves. Natural Philosophy and Chemistry have added largely to the comforts of mankind, and, by rousing industry, have rendered nations wealthy. Phrenology will

yet procure for man more splendid and more solid benefits: It will teach him to know himself; to reform the criminal; to relieve the unfortunate insane; to live in charity with all mankind; and to direct that great moral engine, Education, so as to make it produce its most beneficial effects. Of the innumerable systems of the philosophy of mind, which of them has attempted these great objects, or even put us in the way to discover the means of attempting them * ?

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* Silence is, on some occasions, dignified; but when philosophers do not defend their systems, when attacked at their very roots; when they do not answer questions that are put to them, and do not attempt to explain what their doctrines do not seem to reach, but which they are bound to explain,—their silence must be held as an acknowledgment of error. Universal admiration of their talents, universal gratitude, and reverence for the great labour they have bestowed in searching for truth, and in correcting errors, will ever

Before proceeding to enumerate and to describe the faculties, and the organs by means of which they are manifested, or considering the functions of the brain more minutely, it will be proper to take a general view of the functions of the external senses.

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be felt for the great characters who have devoted so much of their time, some of them their lives, to the illustration of the philosophy of mind. But deep as the homage is which the world pays, it will not uphold the result of their labours against an assailant so powerful as Truth, when on the side even of humble individuals, whose names give no authority to their writings, and make no previous impression on the minds of youth, too impatient of labour, and too ready, for that reason, to subscribe at once to the dicta of those great men whom they have been taught to venerate. It is thus that error has been perpetuated, and inquiry, the only road to truth, almost completely obstructed.

OF THE FUNCTIONS OF THE ORGANS OF THE SENSES.

MANY persons unacquainted with Physiology, conceive that the act of Perception is performed by the organs of sense; that the eye sees, the ear hears, the nose smells, the tongue tastes, and the fingers and surface of the body perceive touch, without the interposition of the brain. A slight acquaintance with anatomy and physiology, is sufficient to demonstrate that such a supposition is erroneous. When the communication between any of the organs of sense and the brain is cut off, the organ remains perfect, but it becomes useless. If the optic nerves of an animal be divided, it becomes instantly blind, although the eyes are untouched, and as capable of acting upon light as before. The simple compression of a nerve suspends the functions

of particular parts, and takes away the power both of motion and of feeling. It has happened to many persons, after having slept with the head resting on one arm, to awake and find the limb palsied and immovable. The will has no power over it in this situation. When the compression is removed, we perceive, by a singular sensation, the circulation of the blood, and of the nervous influence, gradually extending, and life again restored to the limb. From this it is evident that the will, which is an act of the mind, has no power to produce motion, and that the sense of Touch is totally suspended, in a limb through which the progress of the nervous influence, which connects all parts of the body with the brain, is interrupted.

From numerous facts and experiments, the conclusion that the Brain is that part of the body on which the mind directly acts, is irresistible, and, as before observed,

is now generally admitted by all anatomists and physiologists. It is singular, however, that while this important fact was resisted by the learned, the vulgar notions of the uses of the brain have always been in strict conformity with the truth. The most unlearned are in the constant habit, when speaking of a person who is stupid, of using some such phrase as, "He has no "more brains than a goose;"—"His skull "is as thick as a brick."

Since it is settled beyond all dispute, that without a connection with the brain, the organs of sense are of no use, it is evident that the act of perception is not performed by them, but that their use is to convey emanations, so to speak, from the external world, so as to enable them to make impressions on the brain, from which they are transmitted to the mind. The eye being the organ or instrument provided for the admission and condensa-

tion of light, which is again expanded on the retina, from whence the impression proceeds along the optic nerve into the brain, the act of perception must be performed by an internal power. As Sight, then, properly speaking, is an internal faculty, the instruments of which are the eyes, serving as a medium of communication betwixt the faculty and the external world; in like manner, Touch, Taste, Smell, and Hearing, are performed by distinct internal faculties; and the fingers, tongue, nose, and ears, serve as instruments of communication betwixt their respective faculties and the external world *. Many have believed that the perfection of the mental powers depends on that of the

* The doctrine, that each external instrument of sense has a corresponding internal faculty, different from all those enumerated by Dr Spurzheim and Mr Combe, will be afterwards illustrated.

instruments of sense; but a little reflection will shew that this notion is erroneous. If the hands of a skilful mechanician were to be cut off, he could still invent a machine, know what the hands would have had to do in order to construct it, and be able to give directions to another person accordingly. A painter, in similar circumstances, would still know what colours should be mixed, and how they should be put upon the canvas, to produce a certain effect, although unable himself to perform the operation; and if his eyes were destroyed, his knowledge would not be impaired. Blind persons who have once seen, continue to have distinct ideas of form and colour; and those who become deaf, and who had what is called a good musical ear, have a perfect recollection, not only of separate sounds, but of harmony. Without, however, appealing to such cases of mutilation, it is evident

that a mechanician exerts all his powers of invention and combination, and that his machine is perfected in his mind, before he employs his hands to construct. It is evident also, that the instincts of the lower animals do not depend on the perfection of the instruments of sense or motion. The hare and the rabbit have eyes equally perfect; their feet are similar: yet the one lives on the surface, while the other makes its habitation under it. In short, if man was indebted for any of his powers to the perfection of the instruments of sense, we should find idiots displaying all the skill of eminent professional men. Nevertheless, much depends on the perfection of the instruments. Where the instruments are perfect, the internal faculties must be more duly exercised, inasmuch as perceptions are more distinctly conveyed to them.

It has been supposed, that previous exercise is necessary to the perfection of every sense, and particularly to that of sight; and that other senses must be employed before that of sight can be perfect, so as to judge of form and of distance. This is true in so far, that until the instruments and that portion of the brain most immediately connected with them, have come to their full growth, the senses are not perfect. But whoever will undertake to investigate the subject, will find, that at the moment when these parts have arrived at that state which fits them to perform their functions in a perfect manner, the internal faculty of the particular sense enters into activity, and perceives whatever the external instrument conveys to it. A very striking fact, illustrative of this, and of the instruments and corresponding faculties coming earlier to perfection in some animals than in others, was communicated to me a considerable

number of years ago, by my friend Sir JAMES HALL. He had been engaged in making experiments on hatching eggs by means of artificial heat, and on one occasion he observed in one of his boxes a chicken, in the act of breaking from its confinement. It happened that, just as the creature got out of the shell, a spider began to run along the box, when the chicken darted forward, seized, and swallowed it. In this case, it was not merely the eye that was perfect, but innate powers, that led the animal instantaneously to know what was proper for it as food; to judge of distance, and to put into action the power of the will over its limbs.

It may perhaps be thought by some, that Mr COMBE has not sufficiently explained what is meant by the Will being unable to recall the sensations produced by the agency of the external senses. It means that, although the *memory* of a particular sensation produced, that of sourness

on the tongue for instance, be perfect, we cannot, by any exertion of the will, recover the actual sensation which is perceived while a substance producing the sensation of sourness is in contact with the tongue. The idea of sourness remains constantly with us, after the impression has once been perfectly made and perceived; and when a sweet substance is applied to the tongue, we instantly know that it is not sour. According to Mr Combe, it is only the *sensations* of sourness and sweetness that belong to the tongue, the *perceptions* consequent on the sensations being the result of the action of the internal faculties of the mind.

It should be kept in mind, that perception belongs to internal faculties, and cannot be exerted without the assistance of external instruments, which are the means provided by the CREATOR for establishing and keeping up a connection between the external world and our minds. A person

born without a tongue, although his brain be perfect, cannot form any idea of the taste of substances. It has been said, that persons born blind may acquire correct notions of colour, because persons in such a condition have written descriptive poetry, which is taken as a proof that their ideas of colour are correct. I beg leave to quote what I have said on this subject in an "Essay on some Subjects connected with "Taste," page 215.

"It is quite evident that without the "organ of sight, there can be no percep- "tion of colour; and it is impossible that "the identical emotion produced by per- "ception can be excited by mere idea. "A blind man who has never seen, can- "not associate ideas with colour, any more "than a deaf person with music; he can "only associate ideas with certain other "ideas. For a blind person to form the "same associations with words, that ano-

"ther with perfect organs may do with "the things which words express, may be "very possible. But allowing this, it by "no means follows, that a word can produce "in a blind person, an emotion similar to "that which the thing signified excites in "a person who sees. When we read or "hear a description of any thing which "we never saw, we form ideas of it in a "manner analogous to that in which a "blind man forms ideas of colour. But, "as I have before observed, we never de-"rive just notions of any thing from de-"scription; and the reality very frequent-"ly contradicts the ideas we had formed "of it. A blind man can have no diffi-"culty in learning that a rose, the smell "of which was agreeable to him, had a vi-"sible quality which those who had eyes "call pink; and that this same pink was "agreeable to them on the cheeks of a fe-"male. It should therefore excite no sur-

" prise that he spoke, by comparison, of
" the rosy cheeks of a blooming girl. But
" if a blind man was told that something,
" which had a very bad smell, or which was
" unpleasant to the touch, had the quality
" pink, before he had ever smelt a rose;
" it is probable that when he did smell a
" rose, and was told that it was pink, he
" would conclude that this quality in a
" rose was disagreeable; and he would not
" make the comparison. The ideas which
" a blind person connects with words de-
" noting colours, are not connected with
" the colours themselves. Although the
" word red may be understood by a blind
" person to denote something inseparable
" from blood, yet this cannot be the emo-
" tion excited in those who see, by the
" colour itself. The effects of perception
" cannot exist, in the case of colour, in
" one who is blind; and nothing but the
" effects of perception enter into the com-

" position of taste. A blind person may " learn to apply such words as dazzling, " brilliant, clear, soft, &c. when colours " are spoken of; but he can never ex- " perience the effects which are expressed " by such words. Unless it be proved that " he does, the arguments derived from the " case of a blind person, born with the " peculiar talents which form a poet, prove " nothing with respect to the effects of " colour on those who see. If I be correct " in believing, that the same kind of induc- " tion by which, as Mr Stewart first ob- " served, children come gradually to un- " derstand language, operates in the in- " struction of the blind regarding colours, " scenery, and such forms as they cannot " touch, it will not appear surprising that " a blind man with poetical genius, should " quickly combine ideas with ideas, and " with sentiments, and assimilate his feel-

" ings to those which he imagines the real " objects excite in others."

These remarks may be sufficient to give an idea of the manner in which the instruments of sense act in conveying that which gives impressions to the perceptive powers of the mind. The subject will be resumed after the cerebral organs have been enumerated, and their functions described *.

OF THE FACULTIES OR PRIMITIVE POWERS OF THE MIND.

We are apt to acquire a habit of using words, of which we are unable to give a precise definition, in reference to the sense

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* I prefer using the word *instrument*, in speaking of what are commonly called the *organs* of the five senses, and to reserve the latter for the cerebral parts.

in which we employ them. By a sort of imperceptible induction, as Mr Stewart has observed, we come to know that to which a word or sign refers; and hence to understand the use and meaning of language, both natural and artificial. Yet, although we are sensible that we commit no mistake in the use which we make of words or of signs, we sometimes find it difficult to define to others, with precision and clearness, their exact meaning,—what we wish to convey and no more. There are probably very few persons, who, on reading the words *faculties* or *powers* of the mind, will hesitate and ask their meaning. Nevertheless, when we reflect, the ideas which these words convey *may* appear vague and indefinite *. The general con-

* The words *faculties* and *powers* have been used indiscriminately in reference to the mind; and to the latter belong more meanings than perhaps to any other

ception, however, that a *faculty* is a power or capacity of the mind, and the ideas of the mode in which the mind operates, are, both among philosophers and the vulgar, sufficiently correct, although undefined; and the business of the phrenologist is to point out, as distinctly as he can, wherein the faculties in his system differ from the faculties in the systems of other philosophers.

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word in our language. Our great Lexicographer enumerates thirteen. I feel inclined to propose the rejection of this word altogether in treating of Mind; because in its most common sense it implies, not only ability to do, but to do with the purpose of overcoming resistance. The word Faculty has indeed been also employed in a strictly physical sense; but as this occurs but seldom, and as we must have some word to apply to that which belongs to the operations of mind alone, it is best to retain this term, and to define its meaning in phrenology in the best way we can.

In all preceding systems, the Mind has been considered as a single subject; and being endowed with the powers of sensation and thought in a great variety of ways, the authors, for the sake of distinction, have supposed the powers separable; and, according to the mode in which the power of the mind is applied, different names have been given to the separated powers. Thus, the mind's power of speaking, they have called the Faculty of Speech; the power of perceiving, the Faculty of Perception, and so forth. This appears to be the conception which both philosophers and the vulgar attach to the word Faculty. On the general application of this notion, it appears as philosophical to speak of the Faculty of Voluntary Motion, of hearing, of seeing, and so on; as of the faculties of perceiving, conceiving, remembering, &c.; for, in point of fact, the Mind is the only primitive power, and these are merely

modes of its operation. The reviewer of Mr Combe's Essays on Phrenology, in the Literary and Statistical Magazine for November 1819, has compared the Mind to a guinea which is soluble in aqua regia, tending towards the centre of the earth, and affecting the eye with a peculiar sensation. He remarks, that no one supposes the guinea to do so by a single power, and that it is just as little possible to conceive that the mind which perceives, remembers and compares, has only one quality. This comparison illustrates in a precise manner, what metaphysicians understand by the Mind and its Faculties. The power of gravitating towards the centre of the earth never exists in the guinea distinct from its power of affecting the eye with a peculiar sensation, or from its solubility in aqua regia; and any one power is never found to be in different proportions to the others in the same guinea. The guinea is a single

integral subject, and its properties are mere attributes of its existence. With metaphysicians, in like manner, the mind is a single power, and sensation, perception, memory, and so forth, are its attributes or qualities; but any one power or quality is never supposed to be possessed when the others are wanting; nor are they individually supposed to exist in different degrees of perfection in the same mind; all differences arising, in the opinion of metaphysicians, from external influence, habit, study, profession, &c. The mind is considered very differently by Phrenologists; and as the comparison to the guinea seems to have afforded a just illustration of the views of metaphysicians, we may illustrate those of phrenologists by a comparison suggested by a very ingenious friend. The Mind may be compared to an imaginary Tree, having numerous branches, each branch being capable of bearing fruit of

a kind different from that of the other branches. Every branch produces buds, blossoms, leaves, and fruit of its own kind. One branch may be conceived to arrive at a state of maturity to bear perfect fruit, sooner than another; and one to be strong and another weak, according as the nature of the soil happens to be favourable to the growth of the one or of the other. One or more branches may also be conceived as beginning to decay sooner than the others, and some to be affected by disease, while the others continue in a state of vigour and soundness.

Now, in Phrenology, we may compare the Mind to the Trunk, as the single and indivisible subject. The Faculties are the different Branches. Each of the knowing and reflecting faculties in phrenology, perceives, imagines, conceives, remembers, as each branch buds, carries leaves, blossoms and bears fruit. But each faculty

performs only its own functions, individual and specific, as each branch bears its own peculiar bud, leaf, blossom and fruit. The faculty of Tune, for example, perceives, conceives, imagines, and remembers, melody alone; the faculty of Causality, perceives, conceives, imagines, and remembers, ideas of necessary consequence and nothing else. One faculty, like one branch, comes to maturity sooner than another; one may be strong and another weak in the same or in different individuals; one may decay, or become diseased, and the others remain vigorous; and all this in consequence of each faculty having a distinct and specific organ.

The faculties of the metaphysicians, Perception, Conception, &c. correspond to the budding, putting forth leaves, blossoming, and bearing fruit of the tree. But these are attributes common to all the branches, and a knowledge of them does not exhaust the

natural history of the tree we have supposed. The faculties of tune, locality, comparison, &c. in phrenology, are the various branches, each bearing its own fruit; and perception, &c. are the budding, carrying leaves, &c. of each branch. When the *number* of branches, and the kinds of fruit borne by each branch, and also the attributes, such as budding, &c. common to *all* the branches, are ascertained, then, and not till then, is the history of the tree exhausted. Precisely so with the mind. It is not till the number of faculties, their specific functions, and the modes of action of each are ascertained, that the philosophy of mind is perfect.

The illustration may be carried yet farther. Let us suppose two persons to meet, each proprietor of a tree such as we have imagined; and the one to begin describing his tree as carrying one kind of fruit in great abundance, and another kind spa-

ringly, and to say that one mode of treatment he found to be best, while another had proved detrimental; when the other found all these observations at utter variance with his own experience in regard to his own tree, it is obvious that, by merely discussing the points of budding, blossoming, and culture in general, they could never arrive at any means of solving their difficulties, or explaining how their experience of the same kind of tree should be so opposite. In like manner, when two parents meet, and talk over the dispositions of their children, and modes of treatment they have practised, and each finds his own experience producing totally opposite results from those obtained by his friend, they will never be able to account for this by talking of perception, imagination, memory, &c. as general faculties of the mind. But if, comparing their childrens' minds to the trunk of the tree, they

make themselves acquainted with the number of branches which their respective trees carry, with the kind of fruit which each branch bears; if they observe which branch is strongest and which weakest, and notice the soil in which the tree grows; and if they now meet and compare their observations, all their difficulties will vanish. In the one tree, perhaps, the apple branch was strongest, and it flourished by a mode of culture favourable to that fruit, and produced abundantly; while, perhaps, in the other, the apricot branch was the strongest, and the apple one weak; but by applying to both the treatment proper for another kind of fruit, instead of that proper to each, it failed. In the same manner, the faculty of language might be powerful in one child, and weak in another; and whenever the parents attended to this circumstance, they might easily explain why, at school, and both under the

same treatment, one was at the head and the other at the foot of his class. But this explanation could never be derived from the metaphysical mode of philosophizing.

Let us farther suppose the trees to be endowed with life and reason, but that it was a law of their constitution, that they had consciousness only of their general acts of budding, putting forth leaves, blossoming, and bearing fruit, and that they had not the slightest intimation from consciousness that they possessed different branches, by each of which a particular kind of these acts was performed; and suppose that they began to study themselves, by reflecting on the subjects of their own consciousness,—it is obvious that they could never discover the existence and functions of their own various branches. But suppose that the one was to set about studying the other, by observing it, would not this

obviously lead to the discovery, that the different branches possessed different powers of carrying different kinds of fruit? and hence a knowledge of the existence and functions of the different branches would be derived, which each separately could not possibly attain. The former is the metaphysical, the latter the phrenological mode of studying the faculties of the mind; and it is proved that we have no consciousness of the distinct existence and separate functions of the external senses, and much less of the internal organs of the mind.

From reasoning, *a priori*, it would not be supposed that the mind perceives the existence of an external object by means of one faculty, and discovers its various qualities by means of other faculties; and yet such is the case. Instances of the truth of this observation are furnished by reference even to the external senses. Touch informs us of the existence of a rose, and that it is

hard or soft, rough or smooth; but the eye is necessary to discover its colour, and the olfactory nerves its smell. In the same manner, it is proved by phrenological observation, that existence in general is perceived by one faculty, and certain qualities of the objects which exist, by other faculties; and that these are distinct, like the eyes or the nose. Individuality perceives the existence of a tree, but it is by another faculty that we perceive its colour, by another that we perceive its size, and by another that we perceive its form. It will, perhaps, be objected, that it is impossible to perceive the existence of a tree, without distinguishing its colour, size, and form. The fact might be so, and yet these different qualities might be perceived by means of different faculties; because, although distinct, they might co-exist and act simultaneously, and the impression in consequence might appear to us simple and indi-

visible, while in fact it was compound. Accordingly, the proof that the powers of perception are distinct, is to be found in observation. Suppose that we desire three individuals to examine attentively a tree, and to give an account of its colour, size, and form, and we find one capable of distinguishing accurately the shade, another the form, and a third the size; but each, although right in one point, blundering egregiously in the other two; and suppose that we repeat the experiment with other individuals, and that we guard against want of attention, and accidental deficiency arising from want of practice, and find, that, in spite of every endeavour to make them all equal in their power of perceiving all the qualities, still, one will excel in one point, and another in another; we must conclude that the powers of perception are naturally distinct, and bestowed on the different individuals in different degrees. And,

suppose that we find all those who excel in distinguishing the shade of colour to possess a corresponding developement of brain in one part, which those who fail in that act of perception do not possess, and that the same correspondence in other parts exists in the case of the others; the proof would be complete. Here, then, the metaphysical and phrenological modes of philosophizing differ. The metaphysicians suppose every external object, and all its qualities, to be perceived by one faculty, and call that faculty Perception, and ascribe such differences in the power of perceiving as we have mentioned, to different habits of attention in the observers; and they do so, because they are conscious only of the powers of perceiving in general, and not of distinct powers for perceiving different qualities. It may be supposed, that the difference betwixt the two sciences in this respect is one of arrangement or nomencla-

ture merely ; but it is more important, for the practical results are very different. According to the metaphysical philosophy, a parent need never hesitate about the art to which he dedicates his son, for the power of perception is simple, and the ability to apply it in any particular way is the result of habit ; and habit can be acquired. According to the phrenological system, however, he would be embarrassed with more difficulties. He would know, that acute powers of distinguishing shades, and also of judging of form, are indispensable in a painter ; and he would know, not only that these powers were not implied in the mere capacity to perceive existence, but that they were separable, so that the one might be possessed in a great, and the other in a small degree ; and hence, he would be led to enquire whether his son was qualified for that art, before he dedicated him to it. Thus, we learn facts in the philosophy of

the mind by observation, which we could not discover by reflecting on the subjects of our own consciousness.

The main distinction between the metaphysical and phrenological mode of considering the mind is, that what in the former are supposed to be faculties, are considered in the latter as functions of faculties. Phrenologists have been led to their conclusions by taking "that view of the "connection of mind and matter, which is "perfectly agreeable to the just rules of "Philosophy. The object of this is, to "ascertain the laws which regulate their "union, without attempting to explain in "what manner they are united *." In the same note from which the above passage is extracted, Mr Stewart confines himself to the subjects of his own conscious-

* Stewart's Philosophy of the Human Mind, p. 11., Note.

ness; and thus informs us that, at the commencement of his speculations, he plunges at once into the error of believing, that any one individual may be taken as a standard by which the whole human race may be judged. This is the error that has hitherto been fatal to the advancement of the knowledge of man; and that has caused incalculable waste of splendid talent on speculations, connected, indeed, in some degree with facts, but in many respects wholly at variance with them. "Philosophers," says Dr Spurzheim, "as well as other persons, "think differently; and every philosopher "also considers his own manner of thinking and of feeling as the best. It seems "to him to be right, because his consciousness tells him so; but I think he "is wrong in considering himself as the "measure of the absolute nature of man. "I am of opinion, that, in examining the "nature of man, we ought to make an

" abstraction of our manner of feeling " and of thinking. We never ought to " admit, in man, a feeling as the strongest, " or a manner of thinking as the best, " solely because they are conformable to " ours; nor ought we to deny to others " what we do not possess. We ought " only to observe the operations of the " Human Mind, in the conviction that all " essential kinds of manifestations of the " mind, that is, all particular faculties, are " inherent in its nature by creation; and " to observe how every faculty acts and " can act, and under what circumstances " it does act. In this manner I think it " possible to determine the absolute nature " of man, and the infinite modifications of " individuals," (p. 537).

Thus, it is hoped, we have made distinct the peculiar manner of considering the Mind, and of observing Man, which belongs to Phrenology. It is by this that the sys-

tem must be improved, and carried gradually towards perfection, or proved to have no foundation in nature. Although it may appear that, in the writings of phrenologists, the metaphysicians are spoken of in what has been called a tone of dogmatism, it is not meant to speak of them with disrespect. Indeed, if we look into the works of metaphysicians themselves, we find that they use very little ceremony with each other. Dr Reid has given a title to one of his works, which speaks very plainly his estimation of all the writers who preceded him. This title is "An Inquiry into the "Human Mind, on the principles of Com-"mon Sense;" and the unavoidable inference, in which perhaps phrenologists may be disposed to agree, is, that he considered his predecessors as having kept common sense out of view: This, however, is nothing to the bitterness of personal hostility, and of philosophical rancour, which

have been more recently exhibited in some metaphysical discussions. It is no discredit to metaphysicians, that they could not be aware of the close connection between the object of their thoughts and that of the researches of physiologists. It is no dishonour to them that the more general diffusion of knowledge should have led to the discovery of this connection, and to a satisfactory explanation of what they had not the means of explaining. They have done all that could be done with the knowledge of man which they possessed; but those of the present day, who have so successfully proved the failure of their predecessors, must be sensible that there is something yet wanting in the basis of their systems; and the want of which is the cause of the superstructures which have been successively raised, having been so easily removed to make way for others. Phrenologists consider that the basis of

their system is sure; and they are convinced, that until the superstructure shall be perfect, an interval will not elapse so long as that which has expired between the period when the first system of the Philosophy of Mind was promulgated, and the era of DUGALD STEWART. They labour at present to induce the world to look at the basis of their system; to consider, and to learn the means of establishing it, and to assist in raising an edifice worthy of a foundation which they are persuaded is firm. The discovery of the true basis on which a system of the Philosophy of Man ought to be founded, has given rise to a system differing from those reared by metaphysicians, perhaps in little else than this, that they have gone to work with effects, while phrenologists point out the cause, and in consequence arrange the effects in a different manner.

In his endeavours to determine what ought to be considered as a special faculty, Dr Spurzheim has followed certain rules.

That is a special faculty,

1. Which exists in one kind of animals and not in another;
2. Which varies in both sexes of the same species;
3. Which does not manifest itself simultaneously with the other faculties; that is, which appears and disappears earlier or later than the other faculties;
4. Which may act or rest alone;
5. Which alone is propagated in a distinct manner from parents to children; and,
6. Which alone may preserve its proper state of health and disease.

Mind designates the *Class* of Faculties. This is divided into two Orders, I. Feel-

INGS; II. INTELLECT. The first order is divided into two genera, 1. *Propensities;* 2. *Sentiments.* The second order is also divided into two genera, 1. *Knowing* Faculties; 2. *Reflecting* Faculties.

ORDER I. FEELINGS.

GENUS 1. *Propensities**.

IT is exceedingly difficult to invent names for the different faculties of the mind, which shall convey clear ideas of their special functions, or modes of operation. All our fa-

* Dr Spurzheim, in an abridgment of his System published at Paris, has altered in some respects the arrangement of his larger English work, and has added some new faculties. We propose here to retain the original arrangement, and to notice incidentally the alterations which Dr Spurzheim has adopted.

culties are so intimately connected; each is so apt to excite the others into action, that we are liable at first to confound one with another. In reference to this intimacy of connection, we may here remark, that when we consider the brain as made up of a number of organs, each enabling the mind to exhibit a particular manifestation, we find that, anatomically, there is that connection among the parts, without which the singular influence of one organ upon another could not be accounted for, nor the extraordinary results arising from association of ideas.

Those who have written on the Philosophy of Mind, before the doctrines of phrenology were promulgated, have enumerated a certain number of faculties; and whenever any thing occurs which cannot be explained by their means, it is referred to habit or association, or to both; which are not stated as faculties; but we are left to

avail ourselves of them as we can, as auxiliary principles, and to explain their mysterious operations as we please. They are considered of no moment by those who appeal to them; and it is rather surprising, that what is referred to as necessary to explain every anomaly, should be slurred over as not affecting the system which they are called on to support.

That the faculties enumerated in former systems of the philosophy of mind, in the acceptation in which they are wished to be understood, are compound, and not single; that there is not one Imagination, one Judgment, one Memory, &c. but many, seems to be demonstrated by the following considerations.

"No one will deny to an able architect, "a fine taste or imagination for building; "nor to a clever painter, a fine imagina- "tion for composing a picture. But the "architect may not have any taste for

" composing a picture, nor the painter for
" designing a temple. One person may
" have a wonderful imagination for novel
" writing, and another an astonishing faci-
" lity in improving the grounds about
" country seats. But because the one
" could not accomplish what was easy to
" the other, we would not say that either
" of them had no imagination. One per-
" son may have a fine imagination in the
" composition of historical pictures, and
" another in the composition of music.
" The painter may accuse the musician of
" having no taste, because he cannot enjoy
" his picture; and the musician may, with
" equal justice, retort to the painter, that
" he has no imagination, because he does
" not understand music. We know that
" there are persons who are poets, who
" cannot paint; architects who cannot
" compose music; painters who are not
" poets; musicians who are not architects.

" Now, if imagination were one, single, " and undivided faculty of the mind, all " the professions I have named could " never be separated; every man who had " the power, would necessarily be able to " embrace the objects of poetry, architec- " ture, music, painting and a variety of " other things, in a greater or less degree. " But every day's experience of others " and of ourselves contradicts such a sup- " position. We cannot say that the ima- " gination of a great poet is defective be- " cause he cannot design a building, com- " pose a landscape, or an overture. But, " according to Mr Alison's idea, imagina- " tion cannot be perfect unless it can em- " brace every thing; a man cannot be a " poet, unless he be also a painter, an " architect, and so forth. It is impossible " that imagination, if single, can be bril- " liant in one department, and dull in " another, in the same person. But we

" find it so. It appears that this has been " attempted to be explained by supposing " the single power to be modified. But " modification does not explain the facts " I have enumerated. An imagination for " poetry, an imagination for architecture, " and an imagination for music, cannot be " modifications of the same thing; they " must each be separate and distinct " kinds of imagination, and each capable " of existing in various degrees of perfec- " tion.

" It appears that there is something else " besides imagination in the constitution " of what is called taste, in some depart- " ments. There is also something which " enables a man of a fine imagination to " execute what he imagines. Without this " power of execution, he might not be " able to satisfy us that he possessed ima- " gination at all. A man, however, may " possess imagination and not the power

" of execution; and another may be able
" to execute what the other imagines,
" without being able to invent for himself.
" A painter cannot satisfy us of his taste
" without a power of execution, which is
" distinct from the power of imagination.
" We determine whether his taste be good
" or bad by the work of his hands; and
" unless his work be well executed, his
" imagination is of no value to us. Yet
" it is common that a person's imagina-
" tion, or inventive power, is strong, while
" the power of execution is totally want-
" ing. We would not, however, say on
" that account, that he had no taste. Nor
" would we say of a man who can execute
" the designs of another, but who cannot
" design for himself, that he had a fine
" taste. There are also persons who can
" neither invent nor execute, who yet are
" acknowleged to have taste. To be able
" to design implies the possession of ima-

" gination, and the necessity of possessing
" it. But there is taste where there is no
" power of designing. A man may be
" quick in perceiving the beauties and
" deformities of a building, and yet be
" unable to invent or draw a plan. While,
" therefore, imagination and the power of
" execution appear to be necessary for the
" architect, the painter, &c. and are con-
" stituent parts of what we call taste in
" *them*, there is yet what is called taste in
" others who can neither invent nor exe-
" cute. A man may employ several archi-
" tects to give him designs for a house;
" and though he is totally incapable of
" making designs for himself, he possesses
" some power which directs his choice.
" It is not a proof that he has a fine ima-
" gination, that he chuses that plan which
" is generally esteemed the best; for if he
" possessed a fine imagination, he might
" have made designs for himself. Yet we

" acknowledge, when we have observed " his choice, and have heard his opinion " of various buildings, that he has a good " taste. Hence, I am inclined to differ " with Mr Alison in considering imagina- " tion and taste as synonimous ; and to " be of the opinion of those who con- " sider judgment as more nearly allied to " taste.

" The taste necessary for various pro- " fessions is not the same in all. It is " not necessary for an architect to have a " taste for music ; nor for a musician to " have a taste for architecture. It follows " that, if imagination be taste, it cannot " be a single faculty, but must be made " up of certain constituent parts, some of " which may be perfect, and others de- " fective in the same person. There are " many persons who are not affected by " the appearance of architectural objects " either agreeably or disagreeably. An

" architect, therefore, must, in the first
" place, possess a power which enables
" him to derive pleasure from the contem-
" plation of such objects. He must also
" possess imagination; judgment to enable
" him to arrange what he has imagined,
" so that it may answer the purposes he
" has in view, in the best manner; and
" likewise the power of constructing, at
" least on paper, what his imagination has
" invented, and his judgment arranged,
" so that others may reap the benefit of
" his talents. But though imagination
" and the power of construction may
" greatly assist, they are not necessary to
" enable us to decide on the merits of
" his performance; but we must possess
" judgment, together with a capacity for
" receiving pleasure from architectural
" forms. Now, judgment must also be of
" different kinds. For one person who
" judges vastly well of music, cannot judge

" of architecture; and one who judges " well of architecture, may not be able to " judge well of painting. In music, it " sometimes happens, that a person can " judge accurately of harmony, but not of " time; and when he attempts to play on " a musical instrument in concert, he " cannot keep the time. In the same " manner a person may be exceedingly " alive to any trespass on time, and yet " not be sensible to an encroachment on " harmony. Hence it is evident that judg- " ment varies in kind as well as imagina- " tion.

" There is yet another faculty necessary " for a man of taste; and that is memory. " That this faculty varies in kind, is per- " haps more apparent than any variety in " imagination or judgment. One man " may have a very strong memory with " respect to places where he has been; " and may retain the relative position of

" every mountain, tree, rock, river, and
" lake, so as to have constantly at his
" command a picture of every place he
" has visited, which he may contemplate,
" or commit from his memory to the can-
" vas. But the possession of this kind of
" memory does not imply that of retaining
" names. Without a memory for names,
" a landscape-painter may succeed per-
" fectly; but he cannot become a linguist;
" nor a botanist, nor a mineralogist; nor
" pursue with success any other branch of
" natural history. To become a natural
" historian two kinds of memory are ne-
" cessary, which are not always found
" together; viz. a memory for forms, and
" a memory for names. Some persons
" have an extraordinary verbal memory;
" that is, they remember whatever they
" hear, and can repeat it; they can get
" by heart passages of prose and poetry
" with facility, while others cannot retain

" a line; they take pleasure in the study " of language, while others consider it dry " and tiresome. Some persons have a " strong memory for number, and can, " without the help of setting down figures " on paper, resolve very difficult ques- " tions; while others, with every assist- " ance, can scarcely retain the simplest " rules of arithmetic. A musician re- " quires a memory for form, to enable " him to know the signs employed in " music; for place, to distinguish the po- " sition of the notes on paper, and of the " relative position of his fingers on an " instrument; he must also have a me- " mory for time; and all these indepen- " dent of the peculiar musical talent com- " monly called a good musical ear. Many " persons have very delicate ears for har- " mony and for time; and even imagina- " tion for composition, who cannot learn " to play on an instrument. It follows,

" from such facts, that there is an ima-
" gination and a memory belonging to
" each talent; and consequently there
" must also be a distinct perception and
" judgment for each. If perception, ima-
" gination, memory, and judgment, were
" each one indivisible faculty, it would
" be impossible that any man could ex-
" hibit unusual perfection in one talent,
" and be defective in every other, instances
" of which are frequently met with.

" If it be necessary that a man, to be
" an architect, must have imagination, it
" is also necessary that a man must have
" it to be a poet. But how comes it that
" the same power does not enable the ar-
" chitect to write poetry, and the poet to
" build a temple?

" If it be necessary, in order to have
" any pretensions to taste in music, that
" a man should be able to judge well; he
" who pretends to enjoy pictures must

" also have judgment. But how does it " happen, that a first rate painter may be " quite indifferent to music; or that the " most celebrated musician should hold " painting in contempt?

" If it be necessary that a man, to be " an actor, must have memory to enable " him to repeat his part, it is also neces- " sary to enable a man to find his way " back after having passed through a " thick forest. But how comes it that " one man can find his way with much " greater facility than another; that he " can have a local memory remarkably " strong, and yet not be able to get two " lines of poetry by heart? In short, if " we attend to human nature, and ob- " serve mankind, instead of shutting our- " selves up, and presuming to measure " man by ourselves, we cannot refuse to " admit that every art requires a peculiar " talent, to which a peculiar perception,

" imagination, memory, and judgment, be-
" longs. The sciences require various
" talents combined; but each talent must
" have its attendant powers *."

It is to such questions, that, in the first instance, phrenologists have a right to demand answers from metaphysical philosophers; for neither habit nor association can give any assistance in solving them.

The difficulty of distinguishing faculties is scarcely less than that of properly naming them. We know that all our faculties may be abused; that they may be exercised for criminal purposes; while we also know, that the proper exercise of them is the will of our Creator, and necessary to the purposes of our existence. Even the most amiable disposition implanted in us, that of Benevolence, may be so abused, as

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* Essay on some Subjects connected with Taste, by Sir G. S. MACKENZIE, p. 253.

to lead to the encouragement of every kind of vice. It may be, and is indeed too often, excited into action by false tales of distress; and although warned of the danger of giving way to the indulgence of indiscriminate charity, individuals who have this sentiment very powerful, persist in counteracting the efforts of the more judicious, who associate for the relief of the poor, and for the discovery and punishment of impostors. It would be evidently improper, however, to give, on that account, to the sentiment of Benevolence, any appellation that would convey, even in a remote degree, the idea of an indiscriminate indulgence of it, tending to the encouragement of vice. In the same manner, it would be wrong to give to that propensity, which is necessary to all animals for procuring subsistence, a name indicating the commission of murder; or to that propensity by which the species is con-

tinued, one that implies inordinate and criminal indulgence.

The latter propensity is the first of which Dr Spurzheim treats. His arrangement is made according to the position of the organs already ascertained. The function of the 1st Genus of Order I. of the Faculties, is to produce a propensity of a specific kind. These faculties are common to man with the lower animals.

1st, Amativeness *.

This name, though it convey by its derivation, the compound sentiment of Love, seems to be better adapted than any other that has yet occurred, to express the mere

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* This, in the Abridgment published by Dr Spurzheim, is named *Amour Physique (Amativité)*. In the list at the end, *Organe de l'Amour*. I think there is an error committed in using more than one term.

animal desire or propensity. No one doubts that it is in general powerfully felt, and that it is often abused; but it is the specific privilege of man, that justice directs his actions. He is conscious of being degraded, whenever reason cannot justify the gratification of his feelings. It is accurately observed by Mr Combe, that "the special acts done in gratification of the feelings, must always be justified by reason; but a first principle must be, that the innate existence, and native dignity of the feelings themselves, are our sole warrants for owning their authority."

It has been ascertained, that this propensity is manifested by means of that portion of the cerebral mass called the Cerebellum. It is situate in the lowest and back part of the cranium, which is covered by the muscles of the neck. It is sometimes, however, so large, as to have the appearance of a considerable protuberance,

which becomes most remarkable when the subject is lean. In Fig. 1. Plate II. its situation is marked by the number 1, and in this subject it is very small. But in Fig. 2. which gives the same view of another skull, it is seen in a large proportion. To observe this, let the eye measure the horizontal distance from the middle of the backward curve of the ear, to the exterior of the neck; also the general thickness of the neck; and the breadth behind. It will be found, that the cerebellum in males is generally much larger in proportion to the rest of the head, than in females; but in the latter we sometimes find it bearing a proportion as great as that observed in the generality of males. The mode of dressing the hair of females, which has obtained of late years, has been very favourable for ascertaining what the general proportions are. In every case in which it may be known that this propensity is felt more strongly

than in another, the difference will be clearly pointed out by the comparative size of the cerebellum. Let it not be forgotten, that however strong the natural feeling may be, there are other higher faculties, by which, if in due proportion, its utmost energy may be controlled.

2d, Philoprogenitiveness.

This word is intended to include parental love, or love of offspring, and of children in general. This feeling is common to all animals, although in some individuals of every species, it appears to be less powerful than in others. The cuckoo builds no nest, and does not feed its young; but it is by no means regardless where it shall lay its egg. It takes good care that some other bird shall hatch its egg and feed its young. The crocodile and turtle bury their eggs in sand, and leave them, because nothing but

the heat of the sun is necessary to hatch them, and as soon as the young one comes from the shell, it is fit to provide for itself. There are extreme cases, of which we have known several, in which animals are observed to destroy, and even to devour their young; but these are to be referred to disease, or to intense hunger. Among the human race, we cannot fail to remark that some parents neglect their children, or treat them harshly, while others caress and indulge them to excess. Some, on the death of a child, express but little regret, or at least, the violence of unavailing grief is soon moderated by reason; while others sink entirely under the affliction, and will not be comforted. In general, and especially in females, the parental attachment is so strong, that, rather than forsake their offspring, parents will endure every privation, and even suffer death itself.

That portion of the Brain which constitutes the organ of this propensity, is situate immediately above the cerebellum, commencing at the upper termination of the neck, and extending an inch and a half, or somewhat more upwards, and about as much on each side of the vertical plane, dividing the head into two equal parts. This is to be observed in profile; and when the organ is large, the head has somewhat of a drooping form behind. When No. 1. is large, it may have the effect of making this organ appear smaller than it is in reality. To ascertain the exact proportion of the different organs, in dependence on their mutual position and relations, is one of the great difficulties in the way of observation in general, and the student must be very careful to compare all parts with each other, as well as with the standard measure kept in his mind, before he pronounces judgment, even to himself. Neglect in this

respect has given rise to many groundless, though apparently just, objections to the system; and has led critics to state, that, while some facts supported the system, there were anomalies which they could not reconcile to it.

It will be found that the energy of this propensity, when great, will correspond with a great developement; and that wherever a person is known to have an aversion to children, the developement will be small. But let not the effects of benevolent feeling be mistaken for this propensity. A good-natured person will play with children, and amuse them, although the love of offspring be not strongly felt. There is something in the manner of benevolence, which cannot be described, but which will be perceptible to attentive observation, that clearly distinguishes the motives of action.

3d, Inhabitiveness.

It is certainly true that some animals prefer high situations for their places of abode, while others live below; and this is often observable in different species of the same genus. Some animals prefer water to land; and some frequent the highest parts of mountainous regions, although they descend from their elevation in search of their food. It is chiefly from observation on the lower animals, that Dr Spurzheim seems to consider it as certain, that there is such a faculty in man, although the place of the organ is not exactly ascertained. But we are not satisfied that there is such a faculty, because its functions would be too general, perhaps, for a single faculty. One individual prefers living in the midst of wood; another likes an open country. One desires to be surrounded by mountains and

precipices, lakes and rivers; another by country that is level and monotonous. Some feel an inclination to live inland, others prefer the sea-coast. The same special faculty cannot have functions that are opposite. It may vary in intensity, but still its influence must continue in the same direction. The same faculty may, indeed, be directed to different objects. Colour may give as much enjoyment to the faculty appropriated to it, whether it be blue or yellow; or the more opposite, black or white. Still, however, the faculty of colour gives no pleasure to the mind when no colour is present; nor can the faculty apply itself to any thing but colour. Destructiveness may impel us to deprive an animal of life, or to destroy a figure that is lifeless; but it has no knowledge of its opposite, benevolence.

Instead, therefore, of looking for the organ of such a faculty in man, we are dis-

posed to consider his choice of habitation as one of those results of ascertained faculties, which are usually comprehended in the word Taste. In the lower animals, it is extremely probable that a faculty, or several faculties of this kind may exist, directing some of them to seek their food and safety in water; some to build nests on trees and on rocky cliffs; some to make holes in the earth, others to retire to places difficult of access to other animals. But in regard to the existence of this organ even among lower animals, many difficulties are to be encountered. For instance, we cannot conceive that the same faculty prompts a rook to make a nest on a lofty tree, and the rabbit to burrow in the ground; the kittywake to make its nest on the face of a cliff overhanging the sea, and the duck on the margin of a lake, or in a swamp. Nor can we conceive the same faculty to give the impulse to prefer high to

low situations, and the interior of the earth to the surface.

It is possible that there may be a faculty in man, which inclines him to be stationary or sedentary; and which, when weak, may render him indifferent to a place of abode. Such a faculty, however, would be different from that described under the name Inhabitiveness.

That part of the Brain which Dr Spurzheim has conjectured to be the organ of Inhabitiveness is immediately above No. 2.

4th, Attachment.

Friendship seems to originate in a natural disposition to form attachments; and to be fixed by the sympathy of the higher faculties. Vicious persons form friendships; but such are generally founded, not on benevolence and justice, but on the mere sympathy of the lower propensities.

It is the energy of the feeling of attachment, combined with a strong love of approbation, and firmness, that enables a robber, or murderer, to submit to torture, and even to death, rather than betray his accomplices. It is probable, that most of those criminals who turn King's evidence, will be found to have very little of these feelings. There may be exceptions; because the friendship of thieves and rogues (if friendship it can be called) is seldom lasting, being founded on the basis of mutual aid and profit, rather than on any real personal regard. It will be of importance, however, to the student, to examine such persons when opportunities occur; and also persons who are known to have been steady in their friendships; those who have been wavering; and such as form few intimacies.

The place of the organ of this faculty is on each side of that of the last, and outward and upward from No. 2.

It may be remarked here, that although the exact boundary of any organ cannot be ascertained, yet its position may be fixed with certainty. All the organs being double, that is, one on each side of the falx which divides the brain vertically into two hemispheres, it may happen that an organ is larger on the one side of the head than on the other, instances of which we have frequently observed. It is owing to the organs being double, that a severe injury on one side, while the other is safe, does not totally destroy any faculty; and want of attention to the circumstance of the brain being double, has led physiologists sometimes to draw very erroneous conclusions.

5th, Courage.

This name was the first given by Dr Gall to the faculty which it designates; "but afterwards," as Dr Spurzheim informs us, "considering that it is possible for "a man to have courage to do any thing "of which he thinks himself capable, for "instance to dance, play on a musical in- "strument, or sing, when he may have no "propensity to fight, he called it Quar- "relsomeness: and now Self-defence." Dr Spurzheim has given to the faculty the name *Combativeness*, or the propensity to fight. In his last work, however, he has resumed the name first assigned to this faculty by Gall, and has *Courage (Combativité)*, as the title of the section in which he describes it. We are inclined to consider a propensity to fight as a compound feel-

ing; and also that desire which some persons appear to have, of being objects of terror to others. A propensity to fight implies a desire to injure. No man can feel a desire to attack another, and say that he has no desire to hurt him. It has, indeed, been said of Irishmen, that they declare they proceed to break each other's heads out of pure love. But as mistakes are said to be common among that generous people, we need not wonder that the pure love of breaking a head should be confounded with love for the unfortunate head itself. No man, not even the keenest prize-fighter, will say that he fights because he takes pleasure in having his teeth knocked out, his eyes blocked up, his blood spilt, his whole body pummelled into painful swelling. But he will acknowledge that it gives him great delight when he sees one of his blows followed by one of the eyes of his antagonist closing, and another by

the blood streaming from his nostrils; and that, if victorious, he cares little for what he himself may have suffered in the contest. A prize-fighter may have more than one object in view; he may wish to indulge the propensity to destroy; or he may fight for applause or for money. In each case there is a selfish feeling to be gratified. Were he destitute of courage, however, he would seek to gratify his feelings in some other manner. Hence we differ from Mr Combe, in thinking that the faculty Courage gives a desire to attack; and from Dr Spurzheim also, in considering it as a propensity. Courage does not take away the sense of danger, but enables a man to oppose and to disregard it, in the same manner as Firmness enables him to endure much, in order to attain a favourite object. Firmness is passive until employed in accomplishing a plan; and so we conceive is courage, until some object calls

for its exertion. It may be asked, suppose the faculty to be powerfully active, from an internal stimulus of the organ, will it not produce a desire to attack? It may produce a desire to challenge and defy, but not to attack, unless No. 6. be also powerful. Even the result of defiance may require the activity of No. 11. In speaking of No. 6. Dr Spurzheim says, "In the "field of battle, we find a great difference "in the energy of this propensity; one sol- "dier is overjoyed at the sight of the blood "which he sheds; while another, moved "by compassion, gives uncertain blows, or "at least spares the vanquished, and stops "of his own accord after the victory." Now, we are certain that the first case is derived from Nos. 5. and 6. together; and it appears also that, in the second case, No. 5. may have been as powerful as in the first, but No. 6. much less.

Numerous instances are to be found, of men being of the mildest character, who would not desire to see evil returned for evil, and who nevertheless are very courageous; and who, if there was necessity for it, could fight better perhaps than those who are in the daily practice of fighting. It may be said in answer, that such individuals will be found to possess much combativeness, and much benevolence, and that the latter represses the former. But we may venture to affirm, that in such individuals benevolence may not be found in such a proportion as to account for the repression of the former, if it be really a propensity; but that No. 6. will be found in small proportion, and that when this is the case, a large developement of the organ of courage will not be found accompanied by a quarrelsome or cruel disposition. In the case of criminals, all those whom we have had occasion to observe, have had courage

well developed. I consider that, when there is neither much benevolence, nor much sense of justice, a small developement of courage may have the effect of preventing the manifestation of a desire to steal, although the faculty be energetic, because this desire may be repressed by the terrors of the law, or the fear of resistance. But when a man has a strong inclination to steal, or, in other words, to possess any thing, and has also a good developement of courage, he may steal and rob on the highway, or break into a house. Courage is abused in this way, for the purpose of gratifying a propensity. So it is in fighting, when the desire to destroy is gratified, in consequence of courage rendering a man indifferent to what he may pay for his gratification. Much may be said on this subject, but it is of most importance to observe facts as they occur; and in doing so, it is of consequence to consider motives of action,

and to attend to the sources of those motives. Love of approbation, the fear of ridicule and disgrace, have each prompted men to fight, who would not have done so from choice. If it shall be observed that any individual courts contention, and attacks others, without a considerable developement of No. 6. along with Courage, we will give up our opinion that courage is a sentiment and not a propensity.

"It may be inquired," says Dr Spurzheim, "whether the want of this faculty "(Courage) produces Fear. Gall, indeed, "thinks so, but it appears to me that the "absence of any organ cannot produce a "positive sentiment like fear. It is certainly conceivable that the absence of "any organ may produce modifications in "the manner of thinking and feeling, and "thus the absence of this propensity "renders a character peaceable; but I "imagine that in Fear a positive action

"takes place. Hence I think that Gall "is in general wrong in speaking of negative qualities. If fear be the result of "the absence of courage, I cannot conceive how it is possible to be at the same "time courageous and fearful; yet this happens both in animals and mankind. We "shall see afterwards that the sensations "of fear and anxiety are ascribable to "cautiousness." Some arguments may, perhaps, occur, that may incline the reader to think, in opposition to Dr Spurzheim, that fear is nothing but the want of courage. Some of these will be noticed when we come to consider Cautiousness.

The position of the organ of courage is between the ear and Nos. 2. and 4., and is observed by noticing the breadth between the upper portions of the ears, and likewise the projection of the head backwards from the ear.

6th, Destructiveness.

We must carefully distinguish actions from the faculty which inclines or impels us to commit them, and also the excitement of any faculty in the degree necessary to our existence, from the abuse of it in criminal indulgence. A man kills one of his own species, and this action we call murder, and consider as criminal,—as an abuse of a propensity that is necessary to our existence, our comfort, and the protection of every thing we love or value. Mankind feel a natural propensity to kill animals and to devour their flesh; and this, since it is necessary, we do not call criminal. Nevertheless, with respect to the animals themselves, taking away their lives is literally murder; because, to the

meanest reptile, life, the gift of the Creator, is valuable, as well as to ourselves. It is not criminal to preserve animals which are our own property, by destroying other animals whose nature it is to prey upon them. We destroy rats and mice without any feeling of remorse; and yet, when we reflect upon our actions, and recollect that, in the attacks of these creatures on what belongs to us, they are impelled by the very same desire, for the preservation of life, that prompts us to destroy animals for our own use, we cannot avoid acknowledging that, in strictness, we act very unjustly. But the Creator has endowed all his creatures with innate intelligence of what is necessary and fit for them. All of them devour each other, apparently because the existence of an organised being cannot be supported by matter that is not organised. Air and water are the only unorganised substances that are necessary to our existence; but

of themselves they are incapable of keeping the human frame in a condition of vigour, or of maintaining life for any length of time. We allow to all carnivorous animals a natural propensity to kill. Man is omnivorous ; and, to serve his purpose, whether of food, amusement, convenience, or of vanity, he carries destruction among all created things, animate and inanimate.

Dr Spurzheim observes, that the sphere of activity of this faculty extends from mere indifference to the pain which another man, or a brute, may suffer, to the pleasure of seeing them killed, or even to the most irresistible desire to kill. The doctrine, he adds, may shock sensibility, but it is not the less true.

The organ of this faculty is situate behind, and a little above the upper part of the ear. It may be observed, by looking at the head either from behind or before, but it is best seen from behind. By com-

paring the two skulls in Plates II. and IV. it will be observed to be largest in Fig. 2. In Fig. 1. it is a very little developed. In Plate. I. Fig. 2. is an example of its being very large. This is taken from a skull in Dr Barclay's collection, and which he had the kindness to cut through, that we might have this view of so large a mass of brain extending in this particular direction.

7th, Constructiveness.

Some children are observed to apply themselves eagerly to build houses of cards, bits of wood, &c. to cut figures of paper, either imaginary, or in imitation of what they have seen. We have met with a lady who, having once observed a person's profile, could cut a perfect likeness out of paper, at any time afterwards, with a pair of

scissars; and with some young persons who have exhibited this talent in a remarkable degree. Some men follow mechanical or constructive professions from choice; others become mere labourers, and continue to be awkward in every thing they do, while others may be observed to perform the most ordinary things with readiness and neatness. There are persons who invent with great ease, but cannot construct what they invent; and many understand perfectly the nature of an instrument, yet cannot use it. The faculty of constructiveness is essential not only to every mechanical profession, but to all that require construction in any way, as in the arts of drawing, modelling, engraving, surgery, &c.

It is sometimes difficult to observe whether the organ of this faculty be large or small, on account of the varying size of the temporal muscle, and of the cheek bones. It is a little backward and upward from the

external angle of the eye. When very large, the face appears widest at the temples; but this is not always a sure indication. The size of this organ can scarcely be well ascertained, without applying the fingers.

It must be recollected that the function of this faculty is not to invent, but merely to construct.

8th, Acquisitiveness.

The desire to acquire fortune and possessions, appears infinitely more striking in some individuals than in others placed in exactly similar circumstances. In most large families, some children will be found who shew no desire to possess,—are always ready to bestow, and never appear envious; while others may be seen to grasp at every thing, and even by force to deprive their

weaker companions of what they possess. Dr Spurzheim has named this faculty *Covetiveness*. But the English word Covet, implies an abuse of the faculty, in desiring to possess the property of others, to which we have no right, rather than the general propensity to acquire. The character of the miser results, not from his coveting the possessions of others, but from an excessive propensity to acquire and to possess money. Many persons are in reality misers, although money be not their object. Some collect pictures, some books, some medals, some minerals, and other objects of natural history, and delight in the mere possession of them; and the pleasure which they derive from this is generally greatest, when they possess what they know cannot be procured by others. There are also individuals who desire to possess every thing. All these cases may occur without the

slightest desire to deprive another of his property unjustly. In the excess of the faculty whose functions we are in quest of, covetousness is the first degree; and stealing is the result of the highest. But cases have occurred, in which the propensity was so strong, as to demand gratification in the act of stealing, though, as soon as this was obtained, the article stolen was returned with pleasure. Such cases result from the proportion which other faculties bear to this one. A thief has been known to distribute among the poor what he had stolen, his benevolence exceeding his selfishness, which is another result of this faculty. In the desire to possess, there is the desire that self should be gratified, to the exclusion of others, if possible. In the gratification of other propensities, we are satisfied by the simple indulgence, without repining that others should have the same gratification; and it appears, that in the propensity to acquire,

when it is not in excess, there is no repining at seeing others equally successful with ourselves. Selfishness, then, is a result of this faculty. If the name we have prefixed will not do, to denote the general function of the faculty, we must use Propensity to Acquire. It is not only excusable, but necessary, to invent new names.

The organ of this faculty is immediately above No. 6., and clear of the ear; but before and above it; and immediately behind No. 7. It is best observed in a front view of the head.

9th, Secretiveness.

We observe that many persons are far from being communicative. This may proceed, in part, from deficiency in other faculties, but it may also proceed from a special faculty. Many persons dislike to exhibit what they possess, and retire from ob-

servation and question. Others, again, instead of retiring, adopt a manner which is called Obsequiousness, which is used to conceal ultimate views, and to disguise real thoughts and sentiments. It is a very common and just observation, that an obsequious and smiling manner indicates cunning; and cunning means decidedly a desire to conceal something, such as the real motive for action. Some persons are much more ready in discovering means to obtain an object than others, and are called Sly; and all such are observed to succeed best in whatever object they pursue. The faculty from which such dispositions arise, has been called Secretiveness, or the desire to conceal in general. Its organ is above No. 6., and behind No. 8.; and is observed in a front or back view. That part of the skull which conceals the organs Nos. 6, 7, 8, 9, is covered by the temporal muscle, which varies in thickness, and sometimes may

lead the student into error, if he be not careful in observing. He ought also to recollect, that persons in whom the organ of secretiveness is large, are fond of mystery and deceit, and not unfrequently deny (from the mere propensity to conceal) that they possess certain propensities, sentiments or faculties, which are nevertheless manifested in their actions, and indicated on their heads.

10th, Self Esteem.

There is no disposition of the human mind that so readily betrays itself, as that of self esteem. Natural language, in the deportment of a man who has this feeling in excess, tells us at once of its innate existence. Let a man be benevolent, good-tempered, amiable in every respect, self esteem cannot be concealed. The carriage of the body, manner of walking, the tone

of expression in conversation, all combine to betray it. When moderate, this faculty inspires dignity of conduct and manner, and commands respect. It gives a man confidence to turn his talents and knowledge to the best account, while the want of it inspires humility, diffidence and shyness. When powerful, it gives a man ideas of his own importance, to which the world does not subscribe; it inspires pride, arrogance, disdain, haughtiness, presumption. The organ of this faculty is easily observed. It is immediately above No. 3., and when we take the opening of the mouth, continued backwards as a base, and imagine a line drawn from the orifice of the ears backwards, so as to form an angle with that base of about 45° to 50°, and find the head in that region high, self esteem will, to a certainty, be manifested in a powerful degree.

Genus 2. *Sentiments.*

11th, Love of Approbation, or Applause.

There is a faculty that gives rise to a kind of manner which is often mistaken for pride. We see a man extremely careful of his dress, and very anxious to be observed. Without feeling much of the preceding faculty, some persons, observing others who are highly endowed with it, stiff in their manner, holding their heads well up, and commanding respect, they imitate their manner; and to all the formality of dress, add a deportment and style of speaking usually termed *affected.* This takes place when the faculty is too powerful to be properly regulated by others. It then acts in a variety of ways; and in general urges men to exhibit whatever they consider valuable belonging to themselves. One dresses out his person; another courts

applause for dancing well, and for various trifling accomplishments. When powerful, and at the same time well regulated, this faculty gives rise to ambition for distinction of a nobler kind than that which is merely personal. It renders a man industrious that he may excel in learning, in arts, in arms, in the courts and councils of his country. When ill regulated, it may lead, especially among the ill-educated in the lower ranks of life, to the commission of crimes. In a gang of robbers, applause is to be obtained only by daring. Among the dissipated and ill educated of the higher ranks, we may see men limiting their ambition to the poor endowments of being able to drink much wine, to tell good stories, to be able to join in field sports, to sing, to dance with, and flatter the ladies. There are occasions when, with the exception of the first, such qualifications may be of real value; but the possession

of them is so common, that no sensible man considers them of any farther consequence, than to amuse at proper times. But the desire of applause is sometimes so strong, and so perverted, that it prompts individuals to court it by the most trifling and childish expedients.

By this motive alone, some are even prompted to perform deeds of apparent charity; and in our times, many may be seen who, either ignorant of true religion, or mistaking a mere action for that internal impression which, as the Christian revelation teaches us, can alone render an action of any value, rush into the arms of ultra-religionists, and vainly consider their applause as a passport to Heaven. The faculty under consideration is evidently necessary and essential in society; for, as Dr Spurzheim has observed, it excites the other faculties, and produces emulation, and a nice sense of honour.

The organs of this faculty are situate on each side of No. 10. It is probably somewhat lower down than marked in the figure, that the place of this organ is to be found; at least after this had been suggested by Mr Combe, we have found it so in several individuals in whom the faculty is powerful.

12th, Cautiousness, or Fear.

Circumspection, Caution, Shyness, Prudence, seem all to be modifications of one faculty. When too energetic, this faculty produces uncertainty, wavering, irresolution, unquietness, anxiety, melancholy, and hypochondriasis.

In considering No. 5., we proposed to state under this article some remarks which might lead to the supposition, that fear does not belong to this faculty; and we are the more anxious to do this, as for a long

time we entertained that opinion. It is commonly understood, that a man may be prudent, careful, cautious, without being timid. But if we consider a little, we will discover, that prudence is only an expression of fear, lest something should happen contrary to our wishes. A man has an end in view, and he begins to consider the means by which it is to be acquired. He finds on reflection, that, if he proceeded in a certain way, an occurrence might take place that would thwart his views. He therefore avoids proceeding in the manner that first occurred, because he fears it might lead to disappointment. Carefulness clearly implies a fear of loss; and caution a fear of injury, loss, or disappointment. If a man be deficient in courage, and has much cautiousness, he will be unhappy; for he will not be able even to make an attempt to succeed in any enterprise. If he have courage, with much cautiousness, he

will set to work, and probably succeed. But it may be asked, suppose a man to be deficient both in cautiousness and in courage, what are his feelings in situations of difficulty or danger? If caution, when excessive, generates fear, there will be little fear where it is deficient. But since, in the case supposed, there is also little courage, will such a person withstand an attack? This case, it may be said, is an anomaly, although it be conformable to the system. But if it be considered, that the absence or defect of a positive feeling, cannot produce an opposite positive feeling, the appearance of anomaly will vanish. The person who has little cautiousness, and little courage, is what we call a thoughtless character. He rushes into schemes, and he commits hasty actions, which may pass for the results of courage. It is true, there is no fear in the case; but when, by a thoughtless action, such a person brings himself into a situa-

tion of danger, or of unavoidable loss, or of disgrace; fortitude will not come to his aid, to support him under the misfortune; and that deficiency of energy called Cowardice will be observed. It appears to us, that the fear arising from too much cautiousness, is prospective; that it consists of apprehension of what may happen; while the fear arising from want of courage, (a want not being a positive feeling) is a feeling of inability to resist that which comes immediately before us. Thus we distinguish fear from cowardice, the one being a positive feeling, and the other the absence of a positive feeling. Accordingly, in this manner of considering the subject, fear and courage may exist in the same person, however contradictory such an affirmation may at first sight appear. A case has been related to us of a gentleman who has the organs of both cautiousness and courage well developed, and whose feelings, as described

by himself, accord exactly with these views. If he happens to walk out at night, he is in continual fear of being attacked; yet he feels also, that were he actually beset, he could resist and defend himself with energy. We have not the least doubt that many such cases will ere long be observed.

Deficiency of caution may lead courage into activity, when there is no necessity for its exertion; and therefore it is necessary to observe both organs when No. 5. is active; for such activity would not be an argument against our belief of courage being a sentiment, and not a propensity; any more than the activity excited by destructiveness, or love of applause. We must take care not to mark down as anomalies bearing against the system, all cases which a student cannot immediately explain, or which reviewers will not take the trouble to analyse.

We have asked Dr Spurzheim whether there might not be a special faculty, which

rendered life dearer to one man than to another, and the activity of which might in some degree explain certain modifications of fear, and which appear not to belong to cautiousness. This last, as Dr Spurzheim has pointed out, is a predisposing cause, when powerful, of suicide; though not the only cause of that crime. Great fear of accumulated misfortunes is very commonly assigned as the cause of self-destruction. To commit this, one might suppose courage necessary; but we may expect to find courage little developed in suicides; since greater energy of that faculty would have borne them up against misfortunes. It is possible, however, that indifference for life may arise from defect in a faculty which prompts us to preserve our existence. Dr Spurzheim considers love of life as belonging to all the faculties, —a general consent of all to preserve it as long as possible. But we certainly do find

persons who are much more averse to die than others; and among them the virtuous as well as the criminal; the brave as well as the cowardly. We cannot, therefore, resist throwing out a conjecture, that there may be a special faculty which inspires living creatures with a positive dread of annihilation.

We must not, however, neglect to state, that on the heads of many persons who have committed suicide, a large developement of cautiousness, and a very small one of hope, have been observed. The same thing has also been noticed in those, who do not regard death as an evil. We know an individual who has much cautiousness and little hope, from whose mind the idea of death is seldom absent, and who contemplates it without uneasiness. He even sometimes involuntarily wishes for it as a scene of rest, although he confesses that no man has less cause to be dissatisfied with

life. In this individual No. 5. is small. We know another individual who has much hope, little cautiousness, and not much courage, whose feelings are the reverse. The state of the organ of firmness may also have some effect. Instances have happened of criminals destroying themselves, when they had no prospect of escaping the punishment of death. It will be interesting to examine the heads of such persons when opportunities occur.

The organ of cautiousness is immediately outward, laterally, from love of applause. In the figure it is in large proportion, and gives a squareness or angularity to the form of the back part of the head. It may be observed almost in any view, when it is considerable.

13th, Benevolence.

Benevolence is a sentiment which, when sufficiently powerful, governs the lower propensities with a greater sway than reason. It withholds a man who possesses it in an eminent degree, from gratifying himself at the expence of others, and is the source of every thing which we call amiable. Reason and prudence may guide a man whose benevolent feelings are weak, so that his behaviour in general may pass very well in society. But as soon as he is compared with others whose benevolence is powerful, the difference becomes immediately striking, and the defect tends greatly to lessen him in our esteem. The one is cold and indifferent to the wants and feelings of others, and does nothing that can be called generous, kind, or good-na-

tured. The other is ready on all occasions to assist and oblige, with earnestness and warmth; his acts of kindness are prompt and spontaneous, and exhibit neither constraint nor affectation. The truly benevolent man is distressed when thanks are offered to him; for it is true that what he does, gratifies his own feelings. The absence or weakness of benevolence leaves the other faculties to the sole guidance of reason; and as all men acknowledge how easily reason may be overcome when temptations assail them, no greater misfortune can exist, than to have been born with little benevolence. Even this blessed faculty may be abused;—that which, in the Christian Religion, is called Charity and Love, and which is held forth as the basis of virtue,—as that which covereth a multitude of sins,—may be abused. Its excess leads to waste and profusion, to the indulgence and pardon of faults and of crimes. Its

abuses are easily forgiven, for it is the mercy that seasons justice. Who can doubt that such a sentiment is innate, but those whose passions have overpowered the little share of so blessed a sentiment that they may have obtained from nature?

The absence or defect of this faculty does not produce a contrary emotion; it only leaves other faculties without its controlling influence. Hence, a man with much self-esteem, firmness and conscientiousness, with little benevolence, will be extremely rigid, and severe in his transactions. Like Shylock, he will have his bond, and nothing else will satisfy him; mercy will not season his justice. The excess of benevolence, that is, when it is powerful, and not under the regulation of caution and discrimination, tends to very bad consequences; and although much good may be, and is done, by associations of benevolent persons, it is to be feared that in such

this feeling is too little under the direction of foresight. The pleasure, the exceedingly great pleasure that is afforded by the exercise of benevolence, is all that is commonly sought for; and this heedless indulgence is, in reality, in numerous instances, as lamentable in its consequences as the excessive indulgence of any other feeling.

It is easy to distinguish an action done from benevolent motives, from a similar one performed under the influence of love of applause, or with the view to forward any selfish design.

To observe the organ of benevolence, look in the side view from the external angle of the orbit, or commencement of the temple, perpendicularly upwards. When the forehead is perpendicular, the place of the organ commences where the curve backwards begins, and extends about two inches. When the forehead has a curve from above the eyes, the fore part of the organ is usu-

ally found where the perpendicular line above mentioned meets the upper surface. When large in proportion to the neighbouring organs, it raises this part of the head into a ridge. It may be very large and not prominent, on account of the fulness of the more lateral organs.

14th, Veneration.

That Veneration is a sentiment, and not an idea, every one who feels it can testify, without the arguments so clearly stated by Dr Spurzheim. We are disposed to go a little farther than he has done, in reference to the extent of the operation of this sentiment, and to consider that it does not belong exclusively to religion; but that it also operates in prompting that respectful and yielding deportment, by which men commonly shew their feelings towards those who are superior in talents or rank,

and those who are invested with authority. To submit to those in authority is indeed a part of religious duty unconnected with feeling; but we observe that many persons are naturally inclined to shew respect to others, while many also have no such disposition; and this seems to leave no doubt, that the sentiment, called in Phrenology Veneration, extends beyond what belongs to religious worship or veneration. It may be said, that the absence or deficiency of self-esteem, by inducing humility, may give rise to respect for others; and that love of approbation may also produce it. It is no doubt true, that many pay court to the great from love of approbation; and that many thrust themselves into their company, impelled by self-esteem, because they disdain to associate with those of inferior rank. But that respectful conduct which arises out of the sentiment of veneration, may be very easily distinguished from the actions which follow any other motive.

The organ of this faculty is situate at the upper part of the head, in a line with the fore part of the external ear, and is best observed in profile. This organ is generally more developed in women than in men.

15th, Hope *.

Few persons, probably, have given what may be called Philosophical attention to this sentiment; but those who have, cannot refuse assent to its being an innate and special faculty. Perhaps by saying, that it is this which inclines persons to build castles in the air, it may be better understood than by any long disquisition. That man is happy who has

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* This is the number of Firmness in Dr Spurzheim's latest arrangement, and the reader is referred to the list of the Faculties for the alterations.

this faculty powerful. To him all the evils of this life are softened down, by his feeling persuaded that they will be removed; and his prospects of happiness, however frequently they may have been fallacious, afford him as much enjoyment as if they had been realized. When this faculty predominates, the prisoner feels his fetters unloosed; the poor man enjoys riches; the sick man health; fairy prospects are continually flitting before the imaginations of the young; consolation, contentment, and resignation, gild the latter days of the aged and infirm. It may seem scarcely possible that this faculty can be abused. But it gives encouragement to sloth; and all know that idleness is the parent of vice. Credulity is also a consequence of hope being in too great proportion. "He," says Mr Combe, "who has hope more powerful "than cautiousness, lives in the enjoyment "of brilliant anticipations, which are never

" realized; he who has cautiousness more " powerful than hope, lives under the pain- " ful apprehension of evils which rarely exist " but in his own internal feelings. The re- " flecting faculties ought to regulate both." The organs of hope are placed on each side of veneration, and may be observed either in the front or back view of the head.

16th, Ideality.

This sentiment requires for its gratification something even beyond what is possible in human existence. It gives the feeling, that every thing must be carried to its ultimate state, whether of perfection or defect, and even far beyond what ordinary minds conceive of these extremes. Every object that is beheld or fancied, is clothed by it, in an eminent degree, with whatever it wishes to contemplate. It might be called the faculty of En-

thusiasm, for it excites this feeling when accompanied with much hope. It does not form ideas, but stimulates the other faculties to the exercise of imagination. This is the sentiment that gives inspiration to the poet; and imparts the air of poetry to prose compositions, to extempore orations, and even to common discourse, which it renders lively and fascinating.

The organ is situate immediately above Nos. 7. and 8. It is to be observed by looking in front, and measuring the elevation of the head above the temples. In every poet,—in every successful writer of fictitious narrative,—and in every eloquent speaker, an unusual fulness and height will be observed in these parts.

Mr Combe does not take notice of a faculty, the existence of which Dr Spurzheim conjectured in his English work, and which in his last French work he seems to consider as established. As we are per-

suaded that there does exist such a faculty as the one referred to, although it be very difficult to explain its fundamental nature; and that it is one which has given a peculiar tone or cast to poetry and fiction, and is probably the cause of superstition, we quote what Dr Spurzheim says of it in both his works. In the English work, after speaking of ideality, he says, "I have "here to mention certain curious observa- "tions, without being capable of determi- "ning their peculiar nature. We have "observed, that if the part of the head, "above the organ of ideality, and a little "backward from it, be very much deve- "loped, the persons are disposed to mys- "ticism, to have visions, to see ghosts, de- "mons and phantoms, and to believe in "astrology, magic and sorcery. I cannot "say whether this is a particular organ, or "a greater developement of the organ of

" hope, or of that of ideality, or of both to-
" gether."

In his French work, we have the following account of this supposed faculty.

" 18. *Surnaturalité.*

" Je propose ce nom pour designer un
" sentiment de l'homme qui cherche et
" voit en tout le surnaturel. Cette faculté
" est tres prononcée dans l'espèce humaine.
" Les sauvages, ainsi que les nations civi-
" lisées, la manifestent dans bien des occa-
" sions. Tous les peuples ont donnée à leurs
" fondeteurs une origine fabuleuse ; ils pro-
" pagent par la tradition des contes mar-
" veilleux. Beaucoup des personnes s'a-
" musent à des fictions, et à tout ce qui est
" étonnant, surprenant, mysterieux ou mi-
" raculeux. Ce sentiment fait croire aux
" inspirations, aux pressentiments, aux fan-
" tomes, aux demons, à la magie, aux re-
" venans, aux visions, aux sortileges, aux

" enchantements, et à l'astrologie. Il con-
" tribue beaucoup à la foi religieuse par
" la croyance aux mystères et aux miracles.
" Dans les productions dramatiques, il in-
" troduit des esprits et la representation de
" tout ce qui est surnaturel. Etant tres
" actif, il fait voir ou entendre des esprits,
" ou fait qu'on s'imagine en être accom-
" pagné. L'organe de ce sentiment est si-
" tué en avant de celui de l'Esperance.
" Son developpement fait grandir et s'elar-
" gir le volume de la partie superieure late-
" rale de l'os frontal." Dr Spurzheim has since named this faculty *Sens de Marveilleux*. We have found, in our examinations of good portraits, and in a few living subjects that are known by their writings in poetry and fiction, that the head is unusually full and elevated in the region described.

In the plates, the place of this organ is left without a number. With respect to a

name which may convey the proper functions of such a faculty, we are much at a loss. Indeed, we should have concluded that they belonged to those of Ideality, had cases not been observed in which they were powerful, while those ascribed to ideality were weak. Nevertheless, it may be possible, that, in such cases, one portion of the organ of ideality was without energy, while another was active. Perhaps, too, the organ may be an extension of that of Hope.

17th, Conscientiousness.

It is imputed to many, that they have no conscience in their dealings with others; that they are unjust in their estimates both of their own conduct, and of that of others. Many are also spoken of as having sound principles of honour and of justice,—of being conscientious. Both Dr Spurzheim and Mr

Combe have treated of this faculty at length; and in the work of the last named author, is a paragraph which appears to be particularly well calculated to illustrate the possession of this faculty in a high degree.

"This faculty, when powerful, is attended with a sentiment of its own paramount authority over every other; and it gives its impulses with a tone which appears to be the voice of Heaven. It may appear unphilosophical, on the present occasion, to allude to a novel for the illustration of the function of the faculties of the mind; but the faculties of the mind are known by their manifestations in actions; and when the action represented in a novel is true to nature, Philosophy may be better illustrated by reference to that action, than to the mystic speculations of metaphysicians. It appears to me, therefore, that the scene in the Tales of my Landlord, in which

" Jeanie Deans gives evidence on her sis-
" ter's trial at the bar of the High Court
" of Justiciary, affords the best illustration
" of the functions and authority of this fa-
" culty, when supported by Piety, that
" could be given. A strong sense of the
" imperious dictates of duty, and of the su-
" preme obligation of truth, leads her to
" sacrifice every feeling of interest and af-
" fection, which could make the mind
" swerve from the paths of duty; and we
" perceive her holding by her integrity, at
" the expence of every feeling dear to hu-
" man nature. So much is the manner of
" feeling influenced by the different de-
" grees in which this faculty is possessed,
" that I venture to say, many individuals,
" on reading that passage, have thought
" within themselves that this young wo-
" man might have sacrificed the truth
" without great imputation of blame;
" while other readers have approved of her

"conduct with the strongest internal de-
"light, and regarded it as an example of
"every thing that is excellent and heroic."

Mr Combe is of opinion, that the senti-
ment of *gratitude* is derived from this fa-
culty; but to this opinion some objections
may be stated. Were conscientiousness alone
concerned, it would give us the feeling that
we owed a debt which we were bound, and
might be compelled, to pay. Gratitude
appears to us to be a sentiment, indepen-
dent of any feeling of obligation, or of any
desire to repay a favour conferred. No
doubt it impells us to do a good action in
return, when an opportunity offers itself.
But a person in whom gratitude is powerful,
never feels that a debt is paid, although in
strict justice he may have overpaid it an
hundred fold. Gratitude is certainly much
heightened by benevolence; and we ac-
knowledge, that when there is little sense
of justice, gratitude may not be so strongly

manifested; for we have observed, where there was a great developement of benevolence and conscientiousness together, that there was much anxiety to repay favours conferred. But we have also known cases in which the sense of justice and benevolence was strong, but in which gratitude was not powerfully felt; in those cases, it was supposed, that favours conferred were to be repaid as an ordinary debt. Favours conferred,—disease relieved,—difficulties removed, &c. leave an impression on the mind of a grateful person, which can never be effaced. A surgeon performs a successful operation, and saves limb and life. He is, in his own opinion, most amply rewarded by receiving a liberal fee. But his attention, and the due and careful exercise of his skill, render the fee, in the eye of the grateful patient, as by no means an adequate remuneration for the services done. Conscientiousness may be satisfied, and

is often satisfied, but gratitude never. The sense of duty, repentance, and remorse, are no doubt derived from a sense of justice. But gratitude is not a feeling of duty, any more than benevolence, although it be a common observation, respecting persons who receive favours, that they *ought* to be grateful. If by this is meant, that the favour conferred ought to be repaid, and nothing more, then the exhortation is not to be grateful, but just. It is that feeling which arises when the giver is known to expect no return,—to wish for none,—when his benevolence would be affronted were we to offer any compensation, that appears to us to constitute gratitude. Justice, indeed, makes men feel that they owe a great deal, on account of the very disinterestedness of the giver; but we cannot divest ourselves of the belief, that gratitude is something distinct, and not a mere modification of justice. Many persons have

most romantic notions of justice, and many also of gratitude. But a person to whom the latter remark may apply, will not allow that the strictest, the most ample justice, can ever lull the sense of gratitude. After all, it is possible that conscientiousness and benevolence conjoined, and perhaps also attachment, and all of them powerful, may give rise to the feelings which are ascribed to gratitude. But at present we are not satisfied that conscientiousness alone produces this feeling.

18th, Firmness.

There is nothing in which so much variety in the character of man is perceptible, as in the different degrees in which steadiness is possessed. We find some who are never observed to deviate from one uniform line of conduct, whether good or bad.

Others are wavering and uncertain, and not to be depended on in any thing. Firmness and decidedness of character do not depend on will, although persons of this character often say, I will, I insist. They use these terms only from a desire to command, or perhaps aversion to obey, proceeding from feelings of self-esteem and ambition. This faculty gives determinateness to the other faculties; and imparts the spirit of independence, especially when combined with self-esteem. Its abuses, when too powerful, and combined with other energetic faculties, are various. Many will not yield though their reason be convinced that they are in error. Some are perfectly immoveable, although they see all around them yielding and satisfied, and warning them of the consequences of persisting; they are infatuated. Disobedience also arises out of this faculty, when too predominant. The organ of this faculty is between

that of self-esteem and veneration. It occupies that portion of the top of the head directly above the ear; and is best observed in profile.

Order II. Intellects.

Genus 1. *Knowing Faculties.*

19th, Individuality.

Of the faculties now to be treated of, Mr Combe observes, "One great difference betwixt these faculties, and those already treated of, is, that the former are subject to the will; and whatever ideas are formed by means of them, may be recalled by an act of volition; while we cannot directly call a simple

" one of the latter into activity, or recall " a feeling which we have experienced by " the mere act of volition."

The faculty to which the above name has been given, is one that desires to know by experience. The name may be considered as one that does not convey at once the special function of the faculty, without a lengthened process of abstraction. The obvious meaning of the term may perhaps be best conveyed by the word Curiosity; and were it not that this is commonly understood as an abuse, it might be preferable to individuality. This faculty gives us a desire to know, and enables us to perceive with quickness, all that passes around us; and then another term occurs, indicating its active operation, viz. Observation.

When the memory belonging to this faculty recalls any particular scene or occurrence that we have observed, the sensations originally felt are renewed. When

any circumstance is mentioned, or when any thing presents itself to the mind to direct our thoughts to a particular spot, the will is exerted to bring before us whatever may enable us to communicate to others our own impressions of what we saw or heard. In ordinary conversation, let us reflect whether, on a subject being started that reminds us of something illustrative, we do not will that our faculties should be put into action, in order that every particular may be distinctly brought into our view. The fact of our being unable sometimes to recall such particulars of occurrences which we recollect generally, as we desire most to state, and the exertion which we make to recall them, indicate the operation of Will. When we are asked a question about facts, or how any thing may be done, our reply is frequently, "Let me think;" we will to think, and put the necessary faculties into action; and

during the process, all that we can recollect is brought before us, distinguished and compared, and we give our evidence accordingly. We have unquestionably the power of directing certain of our faculties to any object we please, and of confining them to it; of exciting into action particular faculties whose assistance we require, in order to recall the effects of impressions. We cannot, however, recall any actual sensation of taste formerly excited, and perceived, when any particular substance was in contact with the tongue, though we can remember that there is a marked distinction between sweet and sour; but we can recall the *knowledge* of that distinction, or of the *fact* that there is sweet and sour, which knowledge is given to us by the faculty under consideration. Impressions made through the medium of our external senses seem to be intended, not to perpetuate the gratification of sense, not to cloy it, and

overwhelm us at once with satiety; but merely to teach us how to distinguish all objects in the external world from each other, to shew their uses, and thus to enable us to make use of them. The more frequently impressions are made, the more expert we become in the readiness with which we make distinctions; and the memory of facts, which belongs to the faculty of Individuality, becomes stronger. As we cannot recall the sensations of taste, so we cannot, by any exertion of the will, recall the emotions of benevolence, or of rage, &c. When by individuality, we remember the fact of having relieved an object in distress, we also remember that in doing so, we experienced much pleasure; and the recollection of having done a benevolent action gives us satisfaction. But the actual sensations, which arose when the object was before us, when we extended relief, and removed the cause of distress, cannot be re-

called. The distinction drawn by Mr Combe will be found, therefore, correct and important.

Persons who have this faculty powerful, will always be found to possess more general knowledge, than others in whom it is weak. Though not always possessing faculties to enable them to become profound, they are eager to know something of every department of knowledge; when endowed with a good verbal memory, they are most useful and entertaining companions; and frequently appear even brilliant in society. Such persons are happier in themselves, than others who bend their thoughts continually towards one object. They are never at a loss for employment; they can join others in any pursuit, and are never oppressed by ennui.

In his last publication, Dr Spurzheim has separated the faculty of Individuality, into those of Individuality and Phenomena,

He confines the functions of the former to the knowledge of external objects, and their individual existence; and ascribes to the latter almost all that has been given to individuality. The organ of the last mentioned is situate in a line with the nose, immediately above the division of the eye-brows; and Dr Spurzheim places the organ of Phenomena between the inner terminations of the eye-brows, directly above the nose. In children, these parts of the forehead are commonly much developed; and it may be observed that, as a knowledge of external objects is the first thing necessary for a human being, the curiosity of children in general is excessive.

20th, Form.

"The preceding faculty," says Dr Spurzheim, "takes cognizance of the ex-

" istence of external bodies; and the first " quality which our intellect considers in " them is their form." We meet with persons who are unable to distinguish minute differences of form, while others are extremely quick in noticing the slightest variation. The former will scarcely be able, with the utmost exertion, to become expert phrenologists in the art of observing. This faculty gives the power of recollecting forms that have been once observed; and by its energy some are enabled to recognise, after a long interval of time, persons whom they have seen. It is necessary for the natural historian to have the organ of form well developed; and we find it so particularly in portrait-painters, sculptors, and all who are employed in taking likenesses. From this faculty we probably receive ideas of roughness and smoothness. It is certain, as Dr Spurzheim observes, that vision and touch are not sufficient to make us acquainted

with these qualities of bodies; they furnish only the impressions, while the internal faculty forms conceptions of them. If the senses were sufficient, we could never find any person with good eyes, or a delicate touch, who could not distinguish differences of form; and as we do find persons who possess the most correct vision, and the finest touch, without being able to discriminate forms, the proof that the eyes and hands are not sufficient, is ample. The size of the organ is indicated by the distance between the eyes; and the configuration is observed to be more remarkable in some nations than in others. It has been remarked, that the Chinese and the French are remarkable for the distance between the eyes. In all children who amuse themselves by cutting figures in paper, or in drawing, the indication will be found considerable.

21st, Space.

Dr Spurzheim conjectures, that there is a special faculty which enables us to form the conception of *Size*. As size or dimension is comparative, Magnitude might have perhaps expressed more precisely what was meant. But we are inclined to think, that magnitude, size, length, breadth, thickness, height, depth, distance, being all, strictly speaking, referable to extension, the faculty which we are in quest of, is probably that of *Space* in general. Dr Spurzheim refers our notion of space to another faculty, to be noticed presently; the general function of which, however, we think is somewhat different from what he describes, and our reasons for differing from him will be stated.

The organ of the supposed faculties of size, and of the next faculty, and of time,

are conjectured to be situate in the space between Nos. 23. and 26.; but in his last French work on Phrenology, Dr Spurzheim allots a portion of 24. to space. The French word he uses is *L'Etendue*, which means extension or expansion. This, however, is finite, that is, we are able to form ideas of some boundary to extension. The French word which conveys strictly what we understand by our word Space, is, we believe, *L'Infini*.

22d, Resistance.

We cannot judge of Weight as we do of Form, without repeated experience. We may see before us two balls of the same size and colour. We take up one of them, and perceive that it requires a certain exertion or resistance on the part of the muscles of the arm and hand to support it. From

this, however, we cannot determine that the other ball will produce the same effect, for it may be hollow. Now, although we have obtained the experience that two similar balls may not produce the same effect; this experience is of no use to us, for we must always make the experiment of lifting both, in order to determine which is the heavier. The impression of *resistance* is, however, left with us; and probably it is the function of the faculty which Dr Spurzheim calls that of Weight, to give us conceptions of resistance in general. Pressure leaves exactly the same impression as weight; and we may press with our hand on the body of a person who is blind, in such a manner that he cannot distinguish the effects of this, from those of a heavy body laid upon him. Pressure in such a case is not Weight, although their effects be similar on the sense of touch; for the sensation of overpowering weight

may be produced by mechanical force operating on a quantity of matter whose actual weight is trifling. We cannot say that the effects of the hydrostatic paradox are precisely those produced by weight. Pressure and weight, applied to the body, agree exactly in their effects, although their causes are different.

If we admit a faculty of weight, we must also acknowledge that our ideas, knowledge and memory, of consistence, density, ductility, elasticity, softness, hardness, the properties of the lever and other mechanical powers, require for each a special faculty. We think that all these may be referred to a faculty that gives us conceptions of resistance in general. It is, however, merely with respect to the use of a word, and not the functions, that there is any difference between us and Dr Spurzheim. This faculty seems to exist, but the organ is not determined. It is pro-

bable also, that there is a faculty that gives us conceptions of force or power.

23d, Colour.

Many persons who see as clearly and distinctly as others, cannot judge of colours, and do not enjoy their harmonious mixture and arrangement. Some are extremely fond of mere colour; any thing gaudy pleases them, and, in general, those who judge well of colour, are fond of whatever is brilliant. The faculty of distinguishing and enjoying colours, is not sufficient to form a painter. Besides possessing the faculty of colour, he has higher powers that enable him to mix and to apply colours, with a certainty of producing the effect desired. Many persons attempt to become painters who never excel, while others fail altogether in the attempt.

The particular faculty perceives different colours, recollects them, and judges of their relations, but does not adapt them to the objects of painting. It *directs* all who employ themselves with colours, but does not *prompt* to make use of them. Dr Spurzheim, in his last work, remarks, that we ought to distinguish in this faculty, as well as in every other, the difference between great activity, and perfect activity or good taste. When this faculty is in the former state, it gives a passion for mere colour, for glaring and gaudy tints, without regard to arrangement or propriety. It is the province of higher faculties to combine and arrange colours in a proper manner.

The organ of colour often gives roundness to the arch of the eyebrows; but a more certain indication is, when the eyebrow is directed upwards laterally, so as to form an angle. This configuration will be

observed in the portraits of Titian, Rembrandt, Hogarth, and of many other great masters.

24th, Locality.

There is a faculty which Dr Spurzheim describes as enabling us to measure distance, to have notions of perspective, and as that which gives a disposition to travel, to study geography and landscape painting. He supposes it also to judge of symmetry, and he calls it the Faculty of Locality in general. Some of the dispositions which Dr Spurzheim describes as belonging exclusively to this faculty, appear to us to be compound: if we name it that of Relative Position, and call in the aid of some other faculties, we may perhaps be enabled to explain them. The notion of space joined to that of relative position, imme-

diately gives that of distance. As magnitudes are but portions of space, the idea of distance, which is also a portion of space, gives notions of comparative bulk or of dimensions. Space and relative position being combined with form and colour, enable us to conceive a landscape; because, in this operation, we require a knowledge of the forms of various objects, of the space intervening between each, of their comparative magnitude, both in reference to each other, and to the laws of perspective, and also of their relative position. When form is predominant, and another faculty not yet mentioned, Constructiveness, then the inclination to see, to construct, or to paint individual forms, is strong, and we have the portrait-painter and the sculptor. The pleasure derived from enriching the memory with the scenes of nature, may of itself prompt us to travel. But there are many other objects that induce persons to

travel. We are inclined, therefore, to believe that the special functions of the faculty to which the name Locality has been given, are to perceive, judge of, and remember the relative position of objects and places; and that what has been attributed to Locality, is a combination of this with other faculties. Dr Spurzheim says, that Locality conceives the places occupied by external bodies; but there can be no conception of the place of any object, unless it be in its relation to the places of some others.

Some persons travel for the purpose of extending the boundaries of knowledge; others for no purpose but to gratify a desire to see the aspect of countries. Every one who travels has a motive; but we find motives various, and among them the desire for mere change of place is rare. If curiosity belong to individuality, this probably may excite a desire to travel

Whatever be the motive, the pleasure to be derived from travelling, is greatly heightened by the perfection of various faculties; and by none more than those which form the landscape-painter. They enable us to remember distinctly the forms of every thing we have seen, their relative positions, comparative dimensions, colour, &c. We certainly meet with men who are restless, and desirous of change of scene, of amusements, and of employment of various kinds; but may not this arise from constitutional temperament affecting the organs, or from inactivity of some organs rendering perpetual excitement necessary, or from a weak constitution of the organs, rendering them unfit to bear much exertion at one time?

To locality Dr Spurzheim also attributes the migration of birds and other animals. A propensity to change of place occurring periodically, indicates that, du-

ring the intervals, it is dormant or inactive *. We think it probable that a conception of relative position may be necessary to enable a bird to migrate and to reach its destination; but we also think that the propensity to migrate may be a periodical recurrence of something similar to Nostalgia; and the return of animals to their native place, where they have been bred, or have been accustomed to live, may be ascribed to a direct attack of that feeling.

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* Many, at the first mention of such a thing, will be apt to say, that they cannot conceive a faculty active at one time and not at another, and that at regular intervals, while the animal is awake. But it is common in the constitution of animals, that certain changes take place periodically. Such take place in the human uterine system; and the secretion of milk is a remarkable proof of the system undergoing a complete change when a child is born. The amative propensity, in almost all the lower animals, is excited periodically; and there can be no reason for supposing that other propensities may not be excited in the same manner.

With respect to practical geography and astronomy, it cannot be doubted that a readiness in conceiving and remembering relative position, is absolutely necessary to the geographer and astronomer. Mr Combe has mentioned in a note, that if the author of Waverley, &c. who has exhibited such consummate skill and accuracy in describing scenery, have not No. 24. well developed, the system of Phrenology is in danger. The forehead of the supposed author is particularly marked, and full in the region of relative position and individuality. In the portraits of great navigators and travellers, it is frequently a very remarkable feature.

In discussing the conjectured faculty of inhabitiveness with Mr Combe, he had the goodness to make us acquainted with a case, in which locality and inhabitiveness were both very moderate in developement, but the propensity to wander, as he informed

us, very powerful. Dr Spurzheim mentions this propensity as belonging to locality, and he states several remarkable cases in which the organ was much developed, and the propensity strong. The case referred to by Mr Combe was on this account interesting; and we will state the result of our inquiries into the particulars, for the purpose of giving an example of the caution with which we ought to receive the description of any case brought in opposition, since it appears sometimes to be necessary even among friends.

The young man to whose case we refer, had a very strong desire to adopt a seafaring life, contrary to the wishes of his friends. It occurred to them, that a voyage up the Baltic, during the stormy months of October and November, might have the effect of giving him a disgust to the profession for which he shewed so ardent a desire. He suffered so many privations and

hardships, that he yielded to the wishes of his friends, although the desire to go to sea continued as strong as ever. On proposing a few questions, we found that the propensity was confined to *being at sea;* that this propensity did not originate in a desire to wander; for neither travelling on land, nor mere change of place, would have gratified the propensity. At the same time, the person referred to declared, that regular voyages to the same place would not have satisfied him. The propensity had haunted him as long as he could remember any thing. Being anxious himself to contribute to the unravelling of what appeared mysterious and irreconcileable to the system, he stated that he used to go once or twice a-day to examine the mechanism and rigging of ships in Leith harbour, an employment of which he was passionately fond; and long before he commenced his trial voyage, he had become familiar with

the names and uses of every part of a ship and of the rigging. He was fond of machinery, and has often amused himself by making models of ships; and his mechanical turn was so strong, that he had constructed a model of machinery, by which a ship's motion may be applied to work the pumps. This mechanical propensity, and his early attachment to naval machines, together with firmness, appear to us to have given rise to his desire for a seafaring life. Courage also might have prompted his wish to enter the navy. Thus the supposed propensity to wander appeared not to exist; and it was found that a mechanical genius, an early attachment* to the mechanism of a ship, perseverance, courage, and probably also love of approba-

* Dr Spurzheim has shewn, that the faculty of attachment extends its influence to inanimate things, as well as to animate beings.

tion, or ambition, and ideality, all of which were well developed in the individual referred to, combined to inspire the desire of entering the navy.

The organ of this faculty is indicated by the prominence of that part of the forehead which is lowest, and immediately above the nose. A part of the space occupied by it, as marked on the plate, has been allotted by Dr Spurzheim to a new faculty, that of Phenomena, and another part, that towards the eye, to another, '*l'Etendue*,' Space. It is best observed when a light is thrown upon the face from below; but when very large, it is easily recognised, and may be seen also in profile.

It is possible that the same faculty which gives us notions of space in general, may also give us ideas of the division of space into portions. In that case it might be best perhaps to suppose one faculty, and to name it the faculty of Space and relative

Position. The organs which Dr Spurzheim has separated might then be united as before.

25th, Order.

To the last mentioned faculty, Dr Spurzheim attributes judgment of symmetry. This power may, perhaps, be more properly allotted to the faculty now under consideration. There are persons who take great delight in seeing every thing in order and uniform; while others disregard arrangement, and dislike uniformity, which they call stiffness and formality. Many persons are fond of regularity, although they do not shew much of it in their own concerns; they are not inclined to take trouble even to gratify themselves. Some will be found who admire the regularity of a Dutch flower garden, the symmetrical forms produced by the kaleidoscope; houses

built on a regular plan, more than the productions of modern landscape-gardening and irregular buildings. Instead of ascribing symmetry to locality or relative position, we feel inclined to substitute *symmetry* for order, as the name of this faculty. Order implies position in regard to utility and convenience; and in such a sense might be included in relative position. By symmetry is understood regular succession in arrangement, without regard to utility or convenience. For example, if we have three things of the same shape, but one considerably less than the other two, which are of equal size, a person who has this faculty strong, will be inclined to place the small one in the middle. If there are four, two of one size, and two of another, he will place either the two smallest, or the two largest in the middle. We arrange different pieces of furniture in a room, in such a manner as we find most convenient; we

dislike to see them misplaced, and when they are so, we restore them to their proper places; and this we call putting things in order. Suppose we have pairs of any thing to the number seven; these might be in order, were they all arranged according to their sizes after each other. But symmetry would direct us to place either the tallest or the shortest pair in the middle, one of the next pair on each side of them, and so on; or to form them into any other symmetrical figure. This faculty is evidently not connected with Form.

The organ is next that of colour, outwards towards the exterior angle of the eye.

26th, Duration.

Our notions of duration require a special faculty no less than those which we have of space.

Dr Spurzheim has given the name Time to this faculty; but to give the idea of duration is more properly its general function. Time is indeed commonly used to denote duration; but, strictly speaking, time is made up of parts, while duration has no beginning, and no end, and no divisions. Indeed it appears, that Dr Spurzheim actually meant Duration; for he says, "Le "temps peut être considéré sans nombre; "avant hier, hier, aujourd'hui, demain, "après demain, &c. indiquent la durée, "ou une succession de jours, sans compter "leur nombre." We are induced to do with this as we have proposed to do with space and relative position; to name it the Faculty of Duration and Time, understanding by the latter term that office of the faculty which enables us to conceive relative duration, or the ordinary division of time.

It is not at all unusual to find a person with a good musical ear, quite inat-

tentive to the time in which a piece of music should be performed, and, consequently incapable of playing on any instrument in concert. Some persons judge much better than others of the amount of time elapsed between one event and another. Dr Spurzheim thinks, that the organ of this faculty is situate above that of order; and this opinion appears to be confirmed by our own observation, so far as it has extended.

27th, Number.

There are perhaps greater differences to be observed among individuals in the ability to calculate, than in most other faculties. Some have recently appeared who possess most extraordinary powers of calculation; and who seem to perform complicated processes almost instantaneously, and without

thought. Some have been heard to say, that the American boy Colburne, and the English boy George Bidder, have been taught some particular method of performing intricate calculations; that their exhibitions were mere tricks, which any one possessed of the secret, could perform with equal facility. This notion is both unphilosophical and absurd; for it is perfectly well known, that some children learn the ordinary methods of calculating with much more difficulty than others. So far from George Bidder having been taught any method of calculating, he is constantly inventing rules for himself, and improving those he has been accustomed to follow. It is not a consequence of the possession of this faculty in a high degree, that the properties of numbers should be discovered by it. That depends on the possession of superior reflecting faculties; and it is possible that these may enable a person who has but

little of the organ, to observe and to find out properties of number. For instance, it does not require a large developement of number to discover that the figures of the product of the multiplication of any integer by 9 being added together, their sum is 9. This is a fact, however, of which Colburne or Bidder might remain ignorant. The faculty of number seems to give power only over the addition, subtraction, division, and multiplication of numbers; while higher faculties take cognizance of their other combinations and properties. It was not this faculty alone that enabled Napier to invent logarithms.

The organ is small, and very difficult to observe, as a very trifling addition increases its power in a great degree. In Plate VI. Figs. 1. and 2., two extreme cases are represented, Fig. 1. being the configuration of Bidder, and the other that of a person in whom the power is weak. It is

generally indicated best by the breadth between the external angle of the eye-lids and the commencement of the temple; and when it is very powerful, the whole temple between the eye and the ear is remarkably prominent and full.—It does not always affect the shape of the eye-brow, as we have seen a configuration very like that of Bidder, (in a person in whom the faculty of number was very strong,) in which the eye-brow was bent downwards towards the exterior angle, instead of going upwards, as in Bidder. We possess casts of the foreheads of two boys who were remarkable for calculation, one of whom appeared at Vienna and the other at Bath. They present exactly the same kind of developement as that of Bidder.

28th, TUNE.

While all persons with perfect ears perceive the impressions of sound, and can

distinguish different sounds, many cannot perceive the relations of sounds that produce harmony, and some not even the succession that forms melody. In common discourse we speak of one person as possessing a fine musical ear, and of another as having no ear for music. Such differences are common, and every day brings them under our notice: Yet, even philosophers seldom or never think why such differences should exist; or, if they do, they ascribe them, as usual, to education or habit. If they would inquire, they would be informed by any music-master, that pupils are often put under their care who never derive any benefit from their instruction, while others acquire the art of playing without much exertion. This faculty alone, however, is not sufficient to form a perfect musician. Number, and the higher faculties, are necessary for comprehend-

ing the theory of music. This is necessary only for the enjoyment of melody and of harmony, without knowing of what harmony consists, and without the power of playing on a musical instrument. When very strong, it gives so great a desire to hear music, that the person possessing the faculty in such a degree, will, of his own accord, make exertions to learn to play on some instrument.

The organ is situate immediately above that of number, and gives a full appearance to the lateral parts above the external ends of the eye-brows.

29th, Artificial Language.

It is one of the strongest proofs of design in the formation of our bodies, that the utmost economy has been employed to ren-

der an inconvenient multiplication of parts unnecessary. The instruments of speech are also those of breathing, of the sense of taste, of mastication, drinking and swallowing. Speech is a mechanical operation subservient to the will; and it is evident that what has been called the Faculty of Speech must not be confounded with the faculties of the mind. Ideas must exist before any attempt is made to convey them to others, either by audible or visible signs. The instruments of speech are destined to enable us to use articulate and modulated sounds, which are artificial language. When any of the instruments are imperfect, efforts are still made to give names to objects, and to express wants by means of sound. Those born dumb use signs made by moving different parts of the body; and when they make use of sounds, they are intelligible only to those who have observed their application. The dumb

understand the meaning of words, and retain them as perfectly as those who use them in speech. Deaf and dumb persons, when the instruments of speech were perfect, have been taught to speak; and the proof of their retaining words and their meaning, is their making a proper use of them in writing. Dogs and other inferior animals may be taught to understand the meaning of articulate language, so far as they can feel, or conceive the feeling or idea signified, as well as of natural language; but as they cannot invent signs for themselves, it is evident that an articulate sound is to them a mere intimation of command, caressing, or cheering, &c. Though some animals, as the parrot, have instruments fit for articulation, speech is to them unnecessary; for they are incapable of inventing language, and all their feelings and wants are easily expressed without it. It is different with man: he is

furnished with the means of forming ideas, of comparing one thing with another, discovering their uses, and combining them to his advantage. He perceives that numerous combinations may be of the utmost utility to his comfort, and to the gratification of his curiosity; but he cannot effect them alone. He discovers that some of his species are more expert than himself, and that the communication of wishes and ideas to perpetuate and improve advantages which his intelligence has gained, cannot be perfect without articulate sounds, and that all other methods of communication are inconveniently slow. He is prompted by internal feelings to make use of the instruments with which he is furnished by nature, and he pronounces names for the objects around him. Children are often observed to construct a language for themselves, and to invent names; and if two or three children were left to

grow up together without hearing any one speak, they would in a few years be found to have invented a language entirely new. That there is an internal faculty belonging exclusively to language, appears certain, from the fact that some individuals have a much greater facility in speaking and in remembering names and words than others. From some persons language flows in an uninterrupted stream; words are employed to express ideas, instantaneously, and without effort; in others, again, while ideas are rapid and clear, words are not so easily found. Some can recollect, and with ease and correctness repeat verbatim whole chapters of a book which they have read, while others cannot recall two sentences together. Some, in their conversation, are continually making quotations; while others forget what is contained at the beginning of a book, before they have read to the end. The internal faculty cannot

be named that of Speech; for, without making use of speech, a person may learn the meaning of the language used by various nations. Language is the most appropriate name for the faculty that prompts us to speak. Without this faculty, though the instruments of speech were perfect, a person would never speak. We find numerous instances of persons who could never learn any language without the greatest difficulty, and consequently aversion. A good memory for words, which belongs to this faculty, when strong, is what is commonly called a good memory in general. It is unquestionably a most useful kind of memory in society, and the want of it prevents other faculties from appearing to advantage. A person of good talents, without a good developement of the organ of language, will appear slow, and dull, and insipid in conversation. He may have a great store of knowledge, and yet be so unable to express himself well, as to feel

averse to communicate what he has acquired; such a person will write better than speak. Persons who have a strong verbal memory retaining all they have read, and all they have heard, are very often esteemed exceedingly clever, when, in reality, they may be very deficient in general talent. Others who are not blessed with a retentive memory of this kind, may, without being able to retail anecdotes, or to repeat saws of books, have very sound heads, and much valuable knowledge.

The organ of this faculty is situate above and behind the eye; and is indicated in two ways; first when the eye is large, it is pushed forwards when the organ is large, and appears prominent, forming a projection below the inferior eye-lid; second, when the eye is small, and not sunk deep in the socket, it indicates that the socket is not deep, and consequently that the portions of brain above and behind it are well developed.

Genus 2. *Reflecting Faculties.*

30th, Comparison.

If we pay attention to public speakers, we shall find that some of them illustrate their subject by an extensive use of similes. Pleaders before a jury, are aware of the effect which an appeal to the feelings is likely to produce, but many make such an appeal awkwardly and ineffectually; while some, by using metaphorical expressions, fanciful allusions, and by contrasting these with each other, frequently overpower the judgment, and gain their cause. It is probable that a want of the sentiments themselves may contribute to failure, as above alluded to. It is not unusual to meet with a pleader who makes much use of comparisons, but without pathos; and we may

hear another who affects his hearers by a pathetic address, without a single comparison. The one will have less feeling, perhaps, than the other. It is sometimes observed, too, that weak persons, in speaking of ordinary subjects, adorn their discourse with useless ornament, comparing what is trifling to what is of much dignity and consequence, by way of giving importance to a plain matter, and with a view to obtain applause. But we also find men of the strongest minds illustrating their subjects by examples and analogies, applying them with powerful effect, and thus accomplishing a far more general conviction among their hearers or readers, than the most logical arguments could produce. In poetical compositions, we can distinguish whether the faculty called Comparison be possessed by the authors in a great or a small proportion. Poetry does not consist in comparisons, how much soever they may adorn it;

nor is comparison the result of that faculty, to which the name Ideality has been given. That supposes things to exist, while comparison finds out resemblances between them. We are not certain, however, that Comparison is the proper name for the Faculty which Dr Spurzheim has described. Some farther observations on this subject will be made in considering No. 32.

31st, Causality.

While some Naturalists pursue with avidity the open ways that lead directly to the knowledge of the forms and distinctions of external objects, they add little to the expansion of our minds, though much to the stock of our knowledge. Others, when they see an effect, are not content with the mere fact, but begin immediately an attempt to trace the chain which binds it to

a cause, with the view to discover that cause; and they put all their mental faculties into action. Those who are endowed with similar faculties, follow them with pleasure in the search, although among them some may be found who may differ with respect to the nature of the cause to which the effect is attributed by the others. "Let "us examine," says Dr Spurzheim, "what "is the most active faculty of Metaphysi- "cians. Their object is to investigate the "nature of every thing, even the nature of "GOD, and the immortality of the soul. "Though, with Kant and others, I think "that it is impossible, by reasoning, to pe- "netrate the profundity of these subjects, "it may still be examined what special fa- "culty endeavours to do this. Metaphy- "sicians, then, endeavour to explain pheno- "mena, but, in order to do so, it is neces- "sary to examine the relations of cause and "effect. Even Philosophers, who explain

" natural phenomena by reasoning, admit " some cause, and explain the rest by men- " tal induction, according to the supposed " cause. Hence, it seems to me, that this " special faculty examines causes, considers " the relation between cause and effect, and " always prompts men to ask Why ?" This faculty, which has been named Causality, constitutes the chief of those which, in combination, form the true philosophical Understanding. Mr Combe observes, that it penetrates both men and things.

32d, Wit.

" It is asserted," says Dr Spurzheim, " that " wit consists in comparing objects, in order " to discover their similarity or dissimilari- " ty; but the two preceding faculties also " compare; and comparing in a philosophi- " cal way, is quite different from comparing

" wittily. Thus, the essence of the faculty " consists in its peculiar manner of com- " paring, which always excites gaiety and " laughter."

We must confess that, if any other faculty than one compares, we do not see why a special faculty of Comparison should be necessary, any more than one for memory or for judgment. But it is probable that our language not being familiar to Dr Spurzheim, may have prevented his having found an appropriate name for what he has called Comparison. He speaks of the faculty which he has so named, as pointing out the identity, analogy, or difference of objects and facts which Individuality makes known to us. This appears to include what is meant by three different words in our language, viz. Discrimination, Comparison, and Analogy. Comparison implies what is called drawing a parallel between two objects; an attempt to discover a re-

semblance of one to the other; while Discrimination attends only to differences, and enables us to distinguish one thing from another. But it is probable that every knowing and reflecting faculty both discriminates and compares; and that when Gall named the organ called that of Comparison by Dr Spurzheim, that of *Analogy*, he was correct. Comparison is the discovery of a general resemblance between two objects or actions; for example, in describing any thing to a person who never saw it, we compare it to something similar which he has seen, and point out the differences. Analogy, however, is the discovery of resemblance not between objects or actions themselves, but between certain circumstances connected with them, or certain effects which they produce. Although we do not *compare* knowledge to light, as there is no sort of resemblance between the substance of light and what is not material, yet we find an

analogy in the effects of both, and we say that knowledge illuminates the world. The sea has no resemblance to a man, and no one would think of comparing the one to the other. But there is a condition in which both may be placed, and which may lead to an analogical comparison. A man under the influence of anger may be violently agitated, and inclined to destroy whatever comes in his way. The sea in a storm is also violently agitated, and dashes with fury upon the rocks. A man in a violent passion giving blows to those who have offended him, and extending his violence even to inanimate objects that have not injured him, may therefore be compared to a raging sea. While discrimination perfectly distinguishes between the sea and a man in all circumstances, Individuality possesses the facts, and Analogy makes the comparison. Causality, too, gives the information that agitation may be produ-

ced by a variety of causes, and is exhibited in a variety of ways. Thus we must distinguish two kinds of comparison, in order to discriminate the results of No. 30. from those of other faculties. The comparisons made by the knowing and reflecting faculties, respect real differences or resemblances; those resulting from analogy, respect only such as are ideal. That there is some sort of comparison in Wit, is unquestionable; but laughter is excited very frequently by what is called a play upon words, in which analogy is predominant. Some persons cannot immediately perceive the wit of an observation, and such will probably be found not to be witty themselves; yet many who are not witty, enjoy humorous sayings, being capable of tracing the unthought-of resemblance, and seeing at once in what the jest or bon-mot consists.

To go farther in search of what constitutes wit, might lead to a discussion rather

metaphysical than practical. The kind of wit for which an individual may be distinguished, will depend on the activity of other faculties. The organ pointed out as that of wit, is in close connection with those of causality and ideality, and of the next faculty to be mentioned. Dr Spurzheim, in his French Work, has placed this faculty among the Sentiments. He gives no reason for this change of place, and no objection can be made to it, except that the organ of a sentiment may be supposed not likely to be among those of the reflecting faculties. But it is impossible to be witty without reflection; and we find other organs, as tune, number, constructiveness, &c. not far from the knowing and reflecting organs. A man must have reflection, otherwise his organ of tune would not make him a composer of music, nor his organ of constructiveness an inventor of a machine. All the organs aid and influence

each other; and although in general we find them arranged together nearly according to their division into propensities, sentiments, knowing and reflecting faculties, we have no reason for considering the position of the organ of Wit as an anomaly. It is situate laterally with respect to 19. and 30., No. 31. intervening, and the middle of it is immediately above the line separating 23. and 25.

33d, Imitation.

This also has been ranked among the sentiments in the last publication of Dr Spurzheim. Some persons, when they hear a particular kind of music, feel a strong desire to dance; but this cannot be a sentiment, nor can the use of the limbs, in imitating a peculiar manner of dancing, be called the result of a sentiment. But,

without inquiring to what class of faculties it belongs, it is sufficient to state that there is a Faculty of Imitation, and that its organ has been ascertained. It shews itself generally most powerful in children, who evidently learn many things by imitation; even language, the meaning of which they afterwards know by an imperceptible induction. Those that have it most active learn to speak, and to do a great many things, sooner than others in whom it is weak. They are fond of repeating what others say, and are often accused of being little tell-tales. We frequently observe that adults cannot refrain, when they tell a story, from acting and imitating the voice as well as the gestures of the persons of whom they speak. In the constructive arts, imitation is of great moment. In dramatic poetry, and in novel writing, it is indispensable. Pantomime and mimicry

are results of this faculty ; and to an actor it is of the utmost importance.

The following enumeration will be useful for reference in reading the description of the Plates*.

No. I. Amativeness.
II. Love of Offspring.
III. Inhabitiveness.
IV. Attachment.
V. Courage.
VI. Destructiveness.
VII. Constructiveness.
VIII. Acquisitiveness.
IX. Secretiveness.

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* It was intended, as announced in the Note, p. 135., to have detailed the last arrangement which Dr Spurzheim has made; but unfortunately the only copy of Dr Spurzheim's last French work, to which we had access, has been taken abroad by the gentleman who possessed it.

No. X. Self-Esteem.
XI. Love of Approbation.
XII. Cautiousness.
XIII. Benevolence.
XIV. Veneration.
XV. Hope.
XVI. Ideality.
XVII. Conscientiousness.
XVIII. Firmness.
XIX. Individuality.
XX. Form.
XXI. Space.
XXII. Resistance.
XXIII. Colour.
XXIV. Locality.
XXV. Order.
XXVI. Duration.
XXVII. Number.
XXVIII. Tune.
XXIX. Language.
XXX. Comparison.
XXXI. Causality.
XXXII. Wit.
XXXIII. Imitation.

It has been already remarked, that each of the external instruments of sense may have an internal organ appropriated to itself, different from any of those already described, which connects it with a special faculty of the mind. This position requires explanation. We agree with Dr Spurzheim and Mr Combe, in so far as to be satisfied that the impressions made through the medium of the external instruments of the senses, are perceived generally by all the faculties that have been enumerated; just as the excitement of one organ communicates influence to others, so as to render their functions, in some measure, subservient to the one excited. A man, in order to acquire wealth, exerts other faculties, in order that his prevailing propensity, Acquisitiveness, may be gratified. Certain events, or certain things which we see or

hear, not only excite particular faculties, but ideas which belong to others. This is called Association; and is accounted for, phrenologically, by the anatomical fact, that all the organs are connected with each other. But, since it belongs to each faculty to perceive, compare, judge and remember, it can be shewn to be at least probable that special organs exist in the brain, appropriated to each sense, and which perceive before perception is excited, through their means, in the other faculties. Dr Spurzheim and Mr Combe suppose, that the sensations of Taste, &c. take place in the nerves, and the perception of them in the brain generally. This being the case, the sensations of taste, smell, touch, light, and sound, would exist in a being born without brain, but having the instruments of sense perfect; and thus the existence of taste, &c. in the body, is separated from the perception of them by the mind. "The follow-

" ing," says Mr Combe, " appears to me " a correct mode of ascertaining the limits " of the functions of the senses. What- " ever perceptions or impressions receiv- " ed from external objects, *can be re-* " *called* by an act of volition, cannot de- " pend exclusively upon the senses; be- " cause the organs of sense are not subject " to the will, and never produce the im- " pressions which depend upon their con- " stitution, except when excited by an ex- " ternal cause. On the other hand, what- " ever impressions we are unable to recall " by an act of volition, must, for the same " reason, depend on the senses alone." He concludes, a little farther on, " that the " power of experiencing the perception of " melody, and of enjoying the impressions " which it makes, depends on the internal " faculty of tune, while the sound alone " depends upon the ear." Thus he seems to believe, that the *sensation* of sound is in

the ear, while tune belongs to an internal faculty.

Now, although individuals exist who do not possess the faculty of tune but in a very low degree, such individuals are not deaf. They perceive sound, and they compare, judge of, and remember its various qualities; and although they cannot perceive harmony, or even melody, they know perfectly the difference between the sound of a violin and that of an organ, between the cries of different animals, &c. Since, therefore, the operations of the other faculties are performed with regard to simple sounds, it appears to us extremely probable, that there is an internal organ immediately connected with the ear, which directly receives impressions through the medium of that instrument, and from which the organ of tune and other faculties derive them.

Taste and Smell are decidedly propensities; since all animals prefer certain tastes and smells to others. Like other propensities, they may be abused; and are so very commonly,—the first by the epicure, who eats after his hunger is satisfied, and drinks costly wines without experiencing the sensation of thirst; the second by the petit maître and delicate lady, who like to have their persons and chambers highly perfumed. Besides taste and smell being liable to abuse, Insanity affects them, and then we say they are depraved. This epicurean sensibility of taste, and excessive delicacy of smell, it should be remarked, do not appear to be the result of the cultivation of the mere nerves of taste and smell; and they cannot be considered as derived from that of the higher faculties of the mind. They arise, therefore, from great sensibility of the parts of the brain in which the nerves of taste and smell terminate; and

which we have supposed to be the internal organs which communicate the perceptions of taste and smell to the mind, and give us the power of distinguishing one taste and one smell from another,—of comparing several together,—of forming a judgment respecting them,—and of remembering them.

With respect to Light, an organ has been appropriated to colour. But it appears to us, that there is a special cerebral part, which receives the impressions of light that is not separated into its component parts. The office of the organ seems to be, to know, to compare, judge of, and remember—different degrees in the intensity of light, as well as to know its mere existence. It is this which apparently enables us to distinguish forms, by different degrees in the intensity of light forming what we call Light and Shade; which is not the office of the faculty of Colour.

This supposed organ, then, we conceive to be in most direct communication with the eye,—perceiving the existence of light and its degrees of intensity, and assisting the organs of space, of form, and of relative position, by means of what we call Light and Shade. Hence, and not from colour, arises the deception of a picture;—the picture, though in one plane, conveying to us ideas of space, distance, and relative position. This appears to be the only way of accounting for the fact, that some persons judge very well of distance, &c. who cannot distinguish colour; and that others have a passion for colour, who do not judge well of distances, &c. The energy of other internal organs, however well developed, must depend on the perfection of those organs which we have supposed to be in direct communication with the instruments of sense.

We apprehend that the faculty which we have called that of Resistance, is that which belongs exclusively to Touch. First, the mere fact of resistance is perceived; then the degree of resistance, in which are included hardness and roughness,—softness being a low degree of hardness, as cold is of heat, and smoothness a low degree of roughness. Next comes into our consideration, the direction of the resistance, (which gives the idea of weight when it is downwards); and putting all these together, a blind man can judge from them of form, and of the kind of material of which forms consist.

From such considerations, we have been led to believe, that each external instrument of sense is connected, in the first instance, with a portion of the brain allotted to it as an organ, which, communicating with all the other cerebral parts, gives to each faculty the cognizance of the exis-

tence and the properties of the external object to which the instrument of sense is appropriated.

Before adopting this conclusion, however, it is proper to consider the office of the Nerves. The sensation of pain, as well as of taste and smell, seems to exist in a particular part of the body. When the gout attacks the feet, the patient knows that the pain is not in the head; and in the same manner, we know that taste is nowhere but in the tongue. Now, we also know, that by tying up particular nerves, or by dividing them, we take away the power of perceiving pain. Surgeons have been accustomed to compress nerves in order to diminish the pain caused by their operations. When any part of the body is thus benumbed, the nerves of that part still exist entire; and it is evident, that pain cannot be perceived unless the nerves communicate with the brain. If the nerve

that communicates to the brain the impression of taste were to be divided, the tongue might still perform all its offices, but the impressions of taste would not pass beyond it, and would not be perceived. The qualities of bodies which excite *in us* the sensations of taste and smell are particular, and require special means, in order to be conveyed to our knowledge. Pain is not a quality of any thing external, but the effect of injury inflicted on our body, or of some derangement of its economy; but a knowledge of injury or of disease is conveyed to us by the sensation called Pain being communicated by the nerves to the brain. We are able also to distinguish one kind of pain from another, and to judge of the intensity; and our knowledge extends even to the discovery of the cause of a particular kind of pain, from being acquainted with different kinds. For example, we distinguish the pain of burning from

that of a wound inflicted by a sharp instrument; the pain of nausea or sickness from that of rheumatism. The difficulty, therefore, of conceiving the sensations of taste, smell, pain, to be in the nerves, and not in the brain, arises from the fact that they are not perceptible to us, independently of the brain. We cannot easily conceive a sensation to exist which we do not perceive, or have not perceived. From such considerations, it appears, that all we know of the office of the nerves, is, that some of them are destined to communicate to the brain, and thence to the mind, impressions made by particular qualities and properties of external objects, the existence of which objects we previously know; that certain parts of the body have been allotted for the dispersion or expansion of these nerves, and for the reception of impressions; and that there are other nerves which inform us of injury and disease, by

communicating peculiar sensations which are not produced by the inherent qualities of external objects. How we come to know that an impression is made on a particular part of our body, is a mystery as dark as the mode of connection between the mind and the body. It seems enough for the principles of phrenology to know the fact, without entering into such a question as that arising from any supposed identity of sensation and perception, or from the one being conceived independent of the other. The only difference necessary to be kept in mind is, that sensations are various, while perception of them is simply knowledge of their existence at the moment of their being communicated. Sensation and perception are not always simultaneous; for every one must have observed, that while his mind was intent on a particular object, he did not regard what was said to him, although the sound must have reach-

ed his ears. The nerves, then, being only means of conveyance, when a benumbed part is injured, the cause of pain actually exists, although we have not the means of perceiving the effect. The sensations of taste, smell, &c. are the results of the joint action of the nerves and of the brain; and therefore the ideas of Dr Spurzheim and of Mr Combe on this subject, appear to be correct; while, at the same time, it is probable, that there are cerebral parts which, besides perceiving, also compare, judge of, and remember, tastes, smells, pains, &c.

DESCRIPTIONS OF THE PLATES.

DESCRIPTIONS

OF THE

PLATES.

THE skull from which Figures 1. in Plates II. III. IV. and V. are taken, has been selected on account of its being more justly proportioned than any other in our possession, or to which we have had access. It is, however, a small one. That from which Figures 2. on the same plates have been engraved, has been chosen because it is nearly of the same size with the other, being somewhat larger, but differently proportioned. The numbers of the organs have been put on the first skull only, that

the student may begin his practice by having one figure before him marked, and another plain.

We observe in Plate II. that in the first figure No. 1. is small, and in Fig. 2. large. In this view of the head, it is evident that in Fig. 2. there is a general fulness of all the parts exceeding that of Fig. 1. Laterally, Nos. 5. and 6. are strikingly different; and upwards, 15. and 17. are larger in proportion to 14. and 18. than in Fig. 1. While, therefore, the person to whom Fig. 1. belonged, felt the sentiment of veneration more powerfully, the other was the more sanguine, having had more hope, and a stronger feeling of justice: at the same time, the latter had a temper more irascible, No. 6. being much larger; and more courage. The first, we may believe, was more apt to despond than the second.

On looking at the views of the same heads in Plate III. we find that No. 9. is

by much the largest in Fig. 2. and also No. 16. and the organs immediately above. Hence, the size of the lateral organs, particularly of 6. and 9., appears to overbalance that of the organs on the top of the head. Although, therefore, conscientiousness is not so full in Fig. 1., yet 6. and 9. are so small, and 13. and 14. so prominent, that the character of Fig. 1. must be esteemed the preferable. This last had fewer temptations to do what is wrong, and less principle to resist them. Fig. 2. had much greater temptations, but a stronger sense of duty. The first was *naturally* a good character; the second *capable* of becoming a great one, from the triumph of virtue over vicious inclinations.

On looking at the figures in Plate IV. we see how very much the lateral organs are expanded in Fig. 2. beyond those of Fig. 1.; and the forehead in general indicates more power of intellect. Nos. 27.,

28. 7. and 8., are all larger in Fig. 2. In the profile view in Plate V. we see the difference strikingly marked. In Fig. 2. all the lower faculties, 8. 9. 6. 5. 1., and also 10. and 11. are in large proportion; and 18. is higher than 14. No. 2. is so much larger in Fig. 2., and the length from the sinciput to the occiput so considerable, that it may be presumed this was the skull of a female.

In Plate I. Fig. 2. is shewn a very large developement of No. 6., taken from a skull in the collection of Dr Barclay. We possess casts of the heads of several men who were executed for murder, and in all of them this organ is very large. Last year, a young man, named Peter Bowers, was condemned at Edinburgh for murder. It appeared that, when he committed the act, he was in a state of intoxication; and his youth, and some other circumstances, induced his Jury to recommend him to

mercy, and very strong intercessions were made in his behalf; the result of which was his being saved from the gallows, and sent to New Holland for life. The humane and active governor of the Edinburgh jail Mr Sibbald, gave me a deplorable account of the poverty of this young man and his mother, who attended him in prison; and Mr Sibbald expressed his belief, from what he had heard from both of them, that the murder had been more owing to accident than design. We had some conversation with Bowers after his condemnation, and the account he gave of the whole affair which had brought him into his unhappy situation, would have inclined any one who was not a phrenologist, to consider him as perfectly innocent. The general developement of his head was good, but No. 6. was so large, that we were induced to distrust the account we had heard of his previous conduct, and to believe that want

of firmness to resist the impulse of No. 6. when excited, was the cause of his having committed murder. Accordingly, on making inquiry, we found that he had always manifested a cruel disposition; and that he had been once observed to take a harrow from a field, and place it on the high road, in the dusk of the evening, that he might have (to him) the pleasure of seeing horses stumble over it, and wound themselves. He had been noted for outrageous bursts of passion; and there is now a man living at Ormiston, in East-Lothian, whom he nearly killed with an axe. On another occasion, he threw an adze at a girl, and cut her foot dreadfully. He had very nearly, on a third occasion, murdered a man who was peaceably driving a cart along the high way. Notwithstanding all this, we did not consider, from the appearance of his head, that he was a subject undeserving of life, provided he was kept for

a time in confinement, and his mind directed to his profession, and to other objects, which, while they withdrew his attention, from the propensity to destroy, might have excited his better faculties into fuller play. It is not probable, that confinement on board of the hulks, or the society and treatment which he is likely to meet with in New Holland, will improve his disposition, unless the dread of an ignominious death, and his narrow escape, have made an impression sufficiently deep. He is an excellent workman, and, if judiciously treated, may be rendered a useful member of society.

Fig. 3. of Plate I. represents, on a reduced scale, a remarkable example of the frontal sinus, the existence of which has been brought forward by the enemies of phrenology, as a triumphant proof of the fallacy of judging by external indications. This is taken from a specimen in Dr Barclay's

collection. SF is the sinus, the central part of which is seen open, the section being made exactly in the middle. It has been said, that the existence of this cavity prevents the external table of the skull from being a correct indication of the shape or quantity of brain behind it. This, in so marked a case, is perfectly true. But it is also true that, while a man is in the prime of life and healthy, and manifests the faculties of the frontal organs, such a cavity very seldom exists. It is only in old age, or in subjects that have not manifested such faculties as are referred to, (or have manifested them only in a low degree, owing to disease, or natural conformation,) when it is formed; the brain retiring, and, by a wise provision, the inner table of the skull following it. How well the formation of the sinus accounts for the loss of observation and of memory, which is so commonly perceptible when the human frame arrives at a state of decay,

has not been noticed by the opponents of the new system. This is one of the most striking proofs of the correctness of its doctrines, instead of being a fact opposed to them. The example now given was proved to have been the head of an old person, from the alveolar processes being completely absorbed, and from the density of the bone. We have examined a great many skulls, and we have not yet seen one having the sinus, that could be proved to have belonged to a person in the vigour of life and mind. We are aware that such cases have occurred to others; and some in which the subjects were about thirty years of age. But unfortunately nothing was known respecting the manifestations of certain faculties during life. When we find that a person, during life, has the faculties of the organs 23. 24. 19. powerfully manifested, and the indications well marked, and that after death a frontal sinus is found, we must

then, but not till then, acknowledge that the external indications in these parts, are not always to be depended on. In the mean time, if we meet with a person who has the indications well marked, but who does not shew the manifestations, we may presume to say that a sinus or disease exists in the forehead of that person. The external indications of an old person, if he no longer exhibits vigour in 20. 24. 19. and 30. and the neighbouring organs, shew only what he once possessed.

In observing living subjects, some fixed points should be assumed, as the orifice of the ear, the top of the nose, and the nape of the neck, and the eye should be accustomed to the directions in which the different organs lie from these. Drawings, however well executed, cannot alone teach the art of observing. Skulls, or casts from them, should be procured; these may be placed in various positions, so that the stu-

dent may soon become able to describe what organs are most prominent in a picture *. Care must be taken to observe the length of the face, as well as its breadth; for it often happens, that when the face is long it makes the head appear low; and when it is broad and short, the head appears high and large. This may lead to deception. In short, all the proportions of the whole head should be in the first instance observed and compared with measurements preserved in the memory; and it should be remembered that very minute differences of size in the organs produce very remarkable varieties in addition to their influence.

On Plate VI. are delineated two configurations of the organs of number and language. The first, as before mentioned,

* Casts of some of the Skulls represented in the Plate, may be had of O'Niel and Sons, Canongate, Edinburgh.

is drawn from George Bidder, the celebrated calculating boy, and the other from an individual in whom the faculty of number is defective. The difference is very striking, although, from constructiveness being almost as large in the second as in the first figure, that part of the head appears full. But we must not judge solely from the set of the eye-brow, but from the enlargement beyond the exterior angle of the eye, and the fulness at the temples. Calculation and constructiveness are frequently found well developed in the same subject. Verbal memory seems a necessary accompaniment to allow the faculty of number full play; and in all the subjects we have yet seen, who are remarkable for mere knowledge of number, the indication of the organ of language was large. This last organ is small in the second figure, and the verbal memory (or, perhaps, more properly Memory for Names) of the subject is de-

fective. The organ of number is so small that it is difficult to observe it; especially as the size of the temporal muscle varies so much in different subjects.

Plate VII. is the representation of the skull of one of Buonaparte's Young Guard, killed at Waterloo. In this we observe a very large developement of love of approbation and of courage, which are the essential qualities that form the soldier. That of destructiveness is moderate; and benevolence is so well marked, that we may be certain that this soldier was not cruel. The head in general is good.

In Plate VIII. we have a more interesting subject for Phrenology, which bears conspicuously some of the marks most prominent on the last Plate. This is drawn from the skull of Carnimbeigle, a chief of New South Wales, who was killed by a party of the 46th Regiment, in 1816. His skull is now in our possession, having been

presented to us by Mr Hill, Surgeon, R.N. who received it from Lieutenant Parker of the 46th.

The sockets of the eyes are so deep, and so concave upwards, that it may be presumed Carnimbeigle was not an adept in language. The organ of number is very small indeed, remarkably so, as well as the organs of tune, order, and colour. Relative position or locality is large, and Form about the ordinary size, rather small. The forehead is very low, inclining rapidly backwards; hence Nos. 19. 30. 31. 32. are small. There is but little benevolence; and 7. and 9. are small. There is a large developement of 17. 18. 10. 11. 12. 5. 4. 3.; and 2. is considerable, while 1. is small. The organ of veneration is the highest part of the head.

If we are to judge of the natives of New Holland from this specimen, and from two others, of which casts are in our collection,

we should say that the knowing and reflecting faculties give little hope of their being capable of great improvement in knowledge, while the religious and moral faculties may be improved by exertions properly directed. Although, therefore, the progress of these people may be slow; and although their reasoning powers are not such as to lead us to think that their lower propensities can be under perfect controul; still, by working on love of approbation, the sense of justice, and veneration; and by exciting the organ of attachment, by acts of kindness, much may be done for these miserable beings, in improving their moral and religious condition. Their lower propensities do not seem considerable, when compared with foreheads that indicate more intelligence than they seem to possess, although they are large in proportion to their own. The first step towards improving such a people, is to give them confidence,

before any attempt is made to work upon their feelings. As their reasoning powers are weak, and their self-esteem strong, much patience must be bestowed upon them; and firmness being well developed, renders the necessity of patience and perseverance more apparent.

Carnimbeigle clearly possessed all the qualities which we should expect to find in a chief of such a people. Confidence in himself, courage in a high degree, ambition, a strong sense of justice, much cautiousness, with a talent for stratagem, are qualities that constitute a leader among savages; and such also are the qualities which, when united with great talents, form a great leader in civilized life *.

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* From the marks of its action on the bones of the skull, the temporal muscle, which appears to have been uncommonly large, must have been in almost constant and laborious activity. Connected with this, is the re-

The figures of Plate IX. are from a subject still more interesting, being representations of the skull of King Robert Bruce,

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markable condition of the teeth of both jaws. They are much worn, and look as if they had been ground away and polished. Although the enamel of the points is totally gone, and the bony portion wasted almost to the sockets, not one of them has the least appearance of having been carious. Having mentioned to Mr Hill, that these circumstances had struck us as remarkable, and requested him to inform us if the natives of New Holland were as careless about their food as those of Madagascar, who eat up sand and whatever else may chance to adhere to it, he was so kind as to give us the following account, in which will be found some farther particulars respecting Carnimbeigle. "In New South Wales, I was at one time a fortnight among the natives, at the *Five Islands*, a place about sixty miles from Sidney, and had an opportunity of observing their mode of living. At that place there is a creek, which abounds with mullet; and from that circumstance, it is a favourite haunt with the natives, fish being their most choice food. Their mode of cooking is very simple,

taken from a cast made by Mr Scoular at the time when the remains of Bruce were re-interred, in the year 1819.

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merely placing them on the fire or hot ashes without any preparation. When half roasted, they tear out the entrails, which, after having been placed for a little on the fire, they devour, generally covered with ashes, sand, and other impurities. This is always their first, and apparently most savoury morsel. They then proceed to the rest of the fish, which they eat half roasted, giving no quarter to the head, or any part that can be masticated: this is invariably covered with sand. It is truly astonishing the quantity of mullet one of these savages will consume, and that without salt, or any kind of substitute for it. Next to fish, the oppossum and other wild animals seem to be in the greatest request, which they prepare and eat much in the same way. When at the Five Islands, I may observe, that we had two huts erected, and between them we had a large fire. We had always a number of the natives round us, both night and day; and I had frequent opportunities of seeing the process of cooking and eating their fish. I had also occasion to see a native devour an oppossum and its young one. He placed both on

The world is always inclined to value the talents and character of a military hero, at an extravagant rate; to consider the latter

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the fireat the same time, without skinning the animals, frequently turning them, and rubbing off with his hand the singed fur. He then commenced operations on the smaller, which he completely demolished, bones, entrails, &c. I then thought he had made a pretty good meal, and that he would have shared out the large one to the other natives who were sitting round the fire, and whose greedy eyes and watery mouths seemed to anticipate the pleasure of the meal;—but no! To my utter surprise, the large one went the same road with the smaller, with the exception of a few of the hard bones, which he could not masticate. This was done in silence. During the whole process he did not exchange a word with any one; and I observed this to be a general rule. When a native joined our party with a stock of provender, he squatted himself down before the fire, and did not condescend to speak to any one until he had stuffed himself. Then, if he had any to spare, he shared it among the rest, joined in the conversation, or went to sleep. In the case of the oppossum, the savage looked round with perfect

as eminently virtuous, and to ascribe to the individual proportional intelligence. But when we inquire into the private lives of

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satisfaction, and went to sleep. When hard pressed with hunger, I am told, they eat the root of the fern, which I have no doubt will be covered with sand. I have never had occasion to see them eat it.

"Another favourite morsel of theirs, is a large grub which is found under stones. The particular insect to which it appertains, I believe, is not yet known in England. I shall endeavour to ascertain its habits, and procure a specimen. I have seen a native pick them from under stones, and eat them with avidity.

"As you appeared to have taken an interest in this subject, I thought perhaps the preceding observations might account for the appearance of the teeth in the skull in your possession. Be assured I shall endeavour to ascertain if there is any other circumstance connected with their history, which will account for it.

"In the upper jaw, you will observe one of the alveolar processes absorbed. At the age of puberty, it is a general custom of these people to knock out one of the front teeth. I may observe, that Carnimbeigle was a most determined character, one of the few who

heroes, whether of ancient or of modern times, we find that, not unfrequently, they are dissipated, and as anxious about their pleasures and emoluments as about their own fame, or their country's glory. In modern times, great talents are necessary to support a public character as a leader, whether in the cabinet or in the field; but while Scotland was unenlightened by literature and science, under the influence of superstition, and under the dominion of anarchy, it was not necessary for a man to possess pre-eminent reasoning powers, to enable him to become a hero, or a benefactor to his country. Phrenology points out those qualities which

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who were hostile to the settlers, and who annoyed them very much by destroying their cattle. A party of the military were sent out against him and his confederates; but he could not be found, until they procured two native guides. He was then traced to his den, and, being placed at bay, he died manfully, having received five shots before he fell."

must belong to the being who is born to command; and in examining the skull of Bruce, we discover them, although it does not appear that he was a man above mediocrity in point of intellectual powers; nor do we find in history any proof that he did possess a strong intellect, or could take extensive views before he acted. Bruce possessed great courage and astonishing perseverance; and it is evident, from the conformation of his head, that he felt the impulse of ambition. Misfortunes did not make him swerve from his purposes; and we all know what miracles may be wrought by long and steady perseverance in the pursuit of one object.

After freeing his country from a foreign yoke, the subsequent conduct of Bruce, in administering the government, was remarkable more for the checks which he gave to the loose marauding habits of his people, and for his attempts to restore or-

der, than for any display of uncommon wisdom in regulating institutions already existing, or in forming others by which the condition of the country might be permanently improved. On examining his skull, we find, that while it indicates but middling talent, it exhibits all the qualities of the leader and warrior,—qualities which, in the time of Bruce, were more admired than any others which fall to the lot of man. We see Courage largely developed, and Firmness in great proportion; as well as Love of Approbation and Self-esteem. Destructiveness, too, is large; and there is no doubt that Cumming fell by the hand of Bruce. No. 9. so necessary to a man who undertakes the management of public affairs, is also large; but the sense of justice, even when 11. and 6. were inactive, seems to have been scarcely sufficient to guide him in the path of rectitude. Veneration is well marked; but Benevo-

lence is not particularly prominent. The former led him to regret that he had not accomplished his purpose of visiting the Holy Land, and to direct that his heart should be carried thither after his death.

At this moment, while a sort of enthusiasm has been kindled for the memory of Bruce, such an estimate of his character may lead many to think that our system must be faulty; from its being difficult to make them believe that a hero may be both a bad man, and not remarkably clever; that Bruce was neither very superior in intellect, nor in generosity; not very strictly just or merciful. Nos. 9. 11. and 12. may have led him to do great and generous actions when they seemed necessary to clear his way; but if the skull found be really that of Bruce, of which there is no reason to doubt, it is certain that, whatever his conduct may have been, his feelings were those of a man of quick

perception, whose courage was equal to his ambition; his perseverance equal to his confidence in his prowess; his ferocity of temper subservient to these; and his intelligence no greater than to be sufficient to enable him to know how to manage the Scotch as they then were, and to make his own use of the name and character of a hero, who had conquered the enemies of his country. He has been celebrated for nothing else; and no acts are ascribed to him, to mark him as a being possessed of superior wisdom, or of a character particularly aimiable. The reader is requested to compare the skull of Carnimbeigle, the New Holland Chief, with that of Robert Bruce.

The first portrait which we propose to describe phrenologically, is that of Dr SPURZHEIM. What is not seen in the view given in the Frontispiece, is described partly from recollection, and partly from an unfinished

profile sketch by Nicholson. It ought to be mentioned, that in the descriptions of them, the organs are supposed to be, or to have been, active in proportion to their size relatively to each other.

In Dr Spurzheim's head, Nos. 2. and 4. are well marked. No. 5. is small; 11. well developed; 10. moderate. The following are seen on the portrait. No. 6. is large; but whatever may have been the state of activity of this organ formerly, we have reason to believe that it has been completely subdued. No. 7. is defective; and 8. is small; 12. is large. The organs of Wit, Hope, Ideality, and what Dr Spurzheim has called *Surnaturalité*, or *Sens de Marveilleux*, and also Imitation, are weak; Benevolence, Veneration, Firmness and Justice, strong. Nos. 20. and 21. are well developed, and also 25. and 27. Colouring and Tune are large, and Language is well marked. There is a large developement where Dr Spurzheim has pla-

ced the organ of Phenomena, and of Individuality, which is above it. These lead Dr Spurzheim to value facts more highly than reasoning, although Causality and Comparison are both in large proportion. Such a developement does not belie the opinion which every one who was intimate with him during his visit to this country formed of Dr Spurzheim, without having attended to the conformation of his head.

The celebrity of the subject of Plate X. Mr Bewick, as an engraver on wood; the accuracy of his drawing; the minuteness of his descriptions of colours; the humour displayed in his groupes of animals, &c.; and, in short, the correctness of every thing that has proceeded from his hands, lead us to expect a striking developement of some organs. The portrait is taken from an excellent picture by Nicholson; the best work, perhaps, of that rising artist. The view of the head is fortunately

such as to enable us to see distinctly the developement particularly referred to. The most remarkable feature is the indication of the organ of Form, which is so large as to be almost a deformity. We have been told, that Mr Bewick's memory for form is surprising; and his imagination so lively, that he prefers drawing groups without seeing the animals in the attitudes desired. The organ of Colour is indicated in the manner most commonly found in painters. No. 7. is well marked, and 16. 32. and 33. are full. On the whole, what we see of the head, is very good. The head is high, which at first may not be apparent, owing to the face being long and broad.

Plate XI. represents HANDEL, when he was a young man. The figure is one of a group painted in Germany, and in the collection of Gilbert Innes, Esq. of Stow. The fulness of the organ of Tune is re-

markable; and it is equally so in all the figures of the picture who are engaged in playing on different instruments. Form, Language, Ideality, and Imitation, are well marked. Causality, Comparison, and Number, indicate that Handel possessed in no low degree all the qualities necessary to a profound musician.

Plate XII. is taken from the bust, by Chantrey, of the late celebrated James Watt, a man whose talents and ingenuity have conferred benefits on his country, and on mankind, beyond the reach of estimation. The forehead indicates the possession of great talent; Form, Language, Colour, Number, and Constructiveness are all conspicuous. In the profile, the general contour of the head is very fine. Benevolence, Veneration, and Firmness, are prominent. Self-esteem is moderate, and Love of Approbation full. Ideality and Imi-

tation are likewise large. This head has the indications not only of great genius, but of a character of the most attractive kind; and such a genius, and such a character, James Watt was acknowledged to possess.

Next to him we have placed the likeness of his friend, also from a bust by Chantrey; a man who was beloved in the society to which he more particularly belonged, and whose name stood among the highest in the walks of literature and of science. Professor PLAYFAIR, notwithstanding his great ability, and strong reasoning powers, was slow. This proceeded from the large developement of No. 12. and not from want of energy in intellect. Form and Locality are well marked; and with those of Causality, Individuality, Comparison, and Order, constitute the mathematician and astronomer. Number is by no means large; and Mr Playfair was far

from being rapid in calculating. The whole forehead is full; and the depth of the organs great, estimating from the orifice of the ear to the forehead, as seen in the profile on Plate XIV. Benevolence, Veneration, and Firmness, are prominent. No. 10. is no greater than what is necessary to give to a man a proper sense of dignity; and Conscientiousness is sufficiently developed to account for the undeviating rectitude of Mr Playfair's feelings and actions; and for his strong aversion to any symptoms in others, of assuming more to themselves than what was their due. No. 11. is well marked, but 10. is too little to have allowed him to be an egotist. Mr Playfair was exceedingly careful in composing for the press; and his anxiety to elucidate his subject, correctly as well as elegantly, occasioned such delays in his progress, that the world has been deprived of his second geological work, in which his own observations of nature would have

been detailed in a manner most perspicuous, while his candour would have been exhibited in a light the most amiable, in the acknowledgment of some changes of opinion, which the facts he had observed had satisfied him were necessary.

If Phrenology be an accurate Science, it should enable us to determine whether the picture of any celebrated person be correct. Plate XV. is taken from an original picture, in the possession of Colonel Crichton of Edinburgh, of the ADMIRABLE CRICHTON, to whose history the attention of the public has lately been called by the excellent work of Mr P. Tytler. The head, like that of Bacon, is one of an universal genius. From the manner in which the hair lies behind the ear, we may judge that No. 5. was well developed. No. 12. does not appear sufficient to indicate very great prudence; and it is probable that it was

overbalanced by No. 11. while No. 10. was small. Judging from his portrait, had Crichton lived in our times, when science is freed from the trammels of superstition and of dogmatism, he would have been most probably the brightest luminary that Scotland had ever seen.

Plate XVI. is taken from a lithographic impression made from a drawing, by M. Horace Vernet, of LOUVEL, while on his trial for having assassinated the Duc de Berri. M. Vernet sat considerably elevated above the place where Louvel stood; and, owing to that circumstance, and the light falling from above, the eyes are not seen. It was found impossible to get the head of Louvel after his execution, or even a cast from it; the Police of Paris having resisted the most pressing entreaties. This is much to be regretted, as the head of Louvel appears to have been a most valuable phrenological specimen. From only

one view of the head, it is impossible to describe it fully; but we think it right to give such information respecting the character and habits of the man as we have procured, scanty as it is. Louvel was a journeyman saddler. He possessed an independent character; and the love of his country overcame all other considerations. He had great presence of mind; but was ill informed, and taciturn. He was very consistent in his reasoning, but unfortunately the chief subject of it was ill chosen. He admitted that what he had done was a crime, and that he had frequently asked himself, Am I right in my determination? He was very cautious, and communicated his plan to no one; nor did he expect any reward for the destruction of his victim. He even sought to get rid of the idea of the murder he contemplated, by indulging a strong propensity to travel from town to town. To enable him to do this, he fed himself on bread and

water, that he might save as much of his wages as possible. He was very sober. He did not believe in a future state, nor in the existence of a God. His individual feelings appear to have directed all his actions. Such being his character, we find the organ of Firmness large, Individuality and Language small. Causality and Comparison are pretty well developed, and Conscientiousness is large; which last prompted the question, "Am I right?" Cautiousness is large, and Secretiveness and Destructiveness remarkably so, particularly the last. Locality is very prominent; and Veneration is in small proportion. Although he was not destitute of the feeling of benevolence, it does not appear that he ever gave any proof of its activity. He was never in debt; a fact arising from his developement of 17. This organ, we have had occasion to observe, is very small in several persons who have borrowed much money, and who make no exertion to repay it. As far, then,

as we can judge from the portrait of Louvel, Nos. 18. 17. 10. (probably 11.) 6. 5. 9. 24. and 25. are large ; 13. moderate, 14. 15., the *sens de marveilleux*, and 19. are small. Such a developement, without the information which education confers, would render vain all attempts to lead Louvel to repent of what he had done. It is evident, that his having killed the Duc de Berri was the result of a wrong direction having been given, by some cause which cannot now be discovered, to his love of his country, and his sense of justice, while his large organ of Destructiveness prompted him to obtain what he conceived to be justice for his country by the work of his own hands. His large 18. and 10. would confirm his resolution, and 5. would enable him to execute his purpose.

A portrait, in profile, of SANDT, the assassin of Kotzebue, is in our possession ; but it is ill executed, and not authentica-

ted. Nevertheless, No. 6. appears very large; and it is probable, that the developement in this case was not very dissimilar to that of Louvel, in those respects which led him to become an assassin. Ignorance, however, could not be pleaded in excuse for Sandt.

The last example we shall give, Plate XVII. is so remarkable, that, without informing him whose portrait it was, we put it into the hands of a skilful phrenologist, to try how far it was possible to discover peculiarities of feeling and of character. We were much struck with the description, which has given us a very high opinion of our friend's skill, as well as of the correctness of the system which we have embraced. The description we have received is as follows:

"In this portrait, we discover the indications of very powerful talents; a man of deep thought; such a one as might be an able lawyer, speaker, and reasoner; and the

development of imitation might assist to render his eloquence powerful, by giving it expression. Benevolence is strong; but there is very little veneration, and very little hope. Cautiousness is large, and so is destructiveness; ideality also is full. It is probable that this person is regular, or a man of order and method; but his reflections must have a gloomy taint; and his dissatisfaction with the world be considerable. He is a philanthropist, at least more so than a worshipper; though he believes probably in natural religion. If this portrait be correctly drawn, the right side does not quite agree with the left in the region of ideality, and where Dr Spurzheim places the organ, which he has called in French *Surnaturalité*, or *Sens de Marveilleux*, a disposition to believe in what is marvellous and improbable. This dissimilarity may have produced something contradictory in his feelings, which he may have felt extremely annoying. This person may

be respected for his talents, but is not to be envied for his whole developement."

Such are the remarks of a friend. The portrait is that of a celebrated writer, on some of whose works the following observations have appeared in a Critical Journal: "Whoever has read ——— ———, "and there are probably few, even among "those addicted to graver studies, who have "not perused that celebrated work, must "necessarily be eager to see another ro- "mance from the hand of the same author. "Of this anxiety we acknowledge we par- "took to a considerable degree; not, in- "deed, that we took any pleasure in recol- "lecting the conduct and nature of the "story; for murders, and chains, and dun- "geons, and indictment, trial and execu- "tion, have no particular charms for us, "either in fiction or in reality."—"After "———, it would be injustice to Mr "——— to mention ——— ———, where the

" marvellous is employed too frequently to " excite wonder, and the terrible is intro- " duced till we have become familiar with " terror."

DEVELOPEMENT WHICH MAY BE EXPECTED WHEN PERSONS WHOSE CHARACTERS HAVE BEEN PREVIOUSLY DESCRIBED ARE OBSERVED.

HAVING brought these Illustrations to a conclusion, we now propose to take leave of the subject, by suggesting what developement may be expected in the configuration of the heads of those persons who show a decided tendency of character, and of some who follow certain professions with success. We have formerly remarked, that to ascertain character, (by which is meant Actions,)

with precision, by mere observation of developement, is impossible. We can only by this means decide what are the strongest feelings or propensities of an individual; and whether it be probable that his higher faculties are or are not sufficient to regulate both those that are amiable, when under the controul of a sound judgment, but productive of evil when left to themselves, and those which, when excessive, it is difficult for the higher powers to command. We can speak only of dispositions, not of actions; because accidental circumstances may excite to actions quite contrary to ordinary feeling. The following observations, contained in a letter to Mr Combe, and printed at page 288. of that gentleman's excellent Essays on Phrenology, are worthy of attention from every one who wishes to examine the New System with candour, and in a philosophical manner.

"The usual test of the system is, in my opinion, very unfair and inconclusive,—that of taking any single organ as a test of its truth. We do not judge of a character by one feature in particular, but by those general features which result from the assemblage of all those talents and sentiments, and dispositions and actions, and manners, which form the characteristics of man; and of that class in particular in which the individual, the object of our scrutiny, happens to move; so, in the same manner, this system must be proved by trying whether the character agrees in reality with that which you form *a priori* from the combined comparison of the whole head. Not but I conceive, that when one organ is relatively more prominent than any other, then we may safely peril our belief in the system by trusting to it as a true indication of a certain prominent feature in the character. But what I mean is, that we

should never infer this without an examination of the whole head; for, without such an examination, we can neither judge how far this organ is in reality more prominent than the rest, or how far there may not exist a fulness in one or more organs besides, and a fulness indicating both activity and power; and an activity and power of a nature and form which will infallibly prevent the unrestrained operation and exhibition of the one we hastily pronounced upon."

In the cranial configuration of a truly pious, benevolent, and virtuous man, Nos. 1. 5. 6. 9. and 10. will be small in proportion to 13. 14. 15. 17. 18. Such a developement produces naturally, and without effort, a virtuous, benevolent and religious character; such a one as is described in Scripture as having no need of repentance. Supposing the five first-mentioned organs to be in larger proportion, and 13. and 14. less; if 17. and

18. are well developed, they will support 13. and 14. against the influence of the inferior organs. In this case, exertion is required, and the character becomes higher in consequence of successful struggle. Some may be inclined to think that the reflecting faculties should be brought into account; but it is well known, that many individuals who possess the strongest reasoning powers, are incapable, by their means alone, to resist the temptations to which a large developement of the inferior organs subject them. Our religion, indeed, teaches us that such difficulties exist in our nature, as to require something besides mere reason to overcome them; and it is remarkable, that we are admonished to struggle in a particular manner against "the sin that most easi-" ly besets us." This admonition shews a knowledge of the human constitution, which, when we consider the time, and the condition of the world, when it was deli-

vered, strongly indicates inspiration. Phrenology has at length explained how it may happen that one particular sin may beset us, and why extraordinary exertion is necessary to overcome it. We have derived from it, too, a perfect explanation of our Saviour's meaning, when he says, "They "that are whole need not a Physician, but "they that are sick.' CHRIST knew our nature; and all his doctrines, and the whole morality of the New Testament, tend towards raising in our estimation, the importance of cultivating the higher faculties and of subjugating the inferior propensities. We may observe, that those whose religious feelings border on fanaticism, have, generally, the reflecting faculties small: And it is a fact, that, among those who are sincerely religious, without ostentation, or aiming at singularity; who do not refuse to enjoy the blessings which their Maker has provided for man; who

are in society what men ought to be; we find a much larger amount of genuine talent and sound understanding, than among those who are severe and gloomy, and fanciful; and whose object seems to be to make religion an object of fear rather than of love.

Those who are given to flatter others, will be found commonly to be fond of approbation themselves; 17. and 9. will probably be found small in such persons. It is easy to discover from whom praise is really of value. No one who has much of 17. and 9. will be prone to give applause; he will be averse to flattery, and offended by a compliment intended as flattery, even should 11. be so full as to make him pleased when his conduct is approved. In the sycophant, who is officiously attentive, ready to supply every want, and from whose countenance a smile is seldom absent, 8. and 9. will be found well developed, as well

as 11. and 17. small. The developement of 9. should be always well observed before conclusions are drawn in any case.

Habitual liars are sometimes met with. The basis of this propensity to tell lies, is 9. in a state of activity, and unrestrained by 17. Various motives may give rise to the habit; No. 8. or 11. or 10. or 6. or all combined, may produce motives for telling lies, which will be more numerous and varied, if 16. be in large, and either 12. or 14., or both, in small proportion. In the gamester, we may look for much of Nos. 8. and 15. and little of 12. and 13., and probably not much of 17. This character is so nearly allied to that of a thief, that it is scarcely possible to draw a distinction, unless it be that the latter has less of 17. and more of 5., and also, perhaps, a less proportion of the reflecting faculties, the lower propensities bearing the sway.

In the murderer, from whatever impulses his motives for murder may arise, (and these are various, and often singular,) No. 6. is invariably large. Mr Combe has hinted, that this organ may be well developed in the accomplished sportsman; and it is so, being seldom without the accompaniment of 11.

When we meet with a charitable person, one who, according to the ordinary phrase, is good natured, we may expect 13 to be prominent; but there are persons who are charitable from other motives than pure benevolence, and others whose circumstances do not admit of their gratifying their feeling of charity so extensively as they desire. In the truly benevolent character, 8. 9. 10. and 11. will not be large. In a considerable number of those who figure as leaders and speakers in public meetings of charitable institutions, No. 11. is often observed to be considerable, and not always unaccompa-

nied by a sufficient developement of 9. It has been said, that, in order to provide adequate means to enable the truly benevolent to do good, the vanity and weakness of the world must be worked upon; and this is openly avowed. The inference, however, is, that those who thus practise on their neighbours, even although the object be to turn their failings to good account, have not much of 17.; in other words, that they act dishonourably.

The character of a miser is more general than is commonly imagined. A man may be a spendthrift in money matters, and yet be a perfect miser in other things. No. 8. does not apply itself to money alone, but to many other things. A man may be benevolent and yet be a miser; he may be strictly virtuous and conscientious, and give every thing with pleasure but some one thing of which he is covetous. What we usually call the hobbies of persons, arise out of a large developement of No. 8., connect-

ed with that of some other organ. One is a miser in pictures, another in books, a third in collections of curiosities, a fourth in jewels; a fifth shews his propensity in a desire to have the sole management of affairs; a sixth desires to possess every thing, for no other object but to have it in his power to bestow liberally. It is astonishing how variously the faculty of Acquisitiveness, as well as others, operates; and nothing can possibly exhibit the wisdom of the Creator in a more striking manner, than the variety of direction which is given to the faculties. Without this variety, society would be vapid, the progress of knowledge would be retarded, and the whole world would be at a stand.

In the spendthrift, the lower propensities, and No. 11. will generally be observed in large proportion to 8; and the reflecting faculties, and 12. will not be very conspicuous.

Those men who take the lead in societies, and in public affairs, will be found, almost uniformly, to have more of 19. and 29. than of 30. and 31; and in every case a very considerable developement of 10. and 11. and frequently much of 5.

Those persons who study Natural History, and are deeply versed in any of its branches, will be found to have 19. 20. 25. 29. and 30. well marked. Natural philosophers have all from 19. to 31. inclusive, and for the most part 7. Metaphysicians have 30. and 31. largest, but not always the latter. Poets have uniformly a large developement of 16. and 29. and their writings will tell when they may be expected to have other organs largely developed. Mimics and good actors will be found to have 9. and 33. large.

In the orator, 29. will be found prominent; and the style of his speeches will be guided by the developement of other organs. If he reasons closely, and sticks to

the facts of his case, the lawyer will possess more of 19. and 31. than of 16. If his speech be ornamented, 16. will be prominent. No. 9. gives facility in arguing a case, of the merits of which the pleader may not be quite satisfied; and, indeed, to make an accomplished lawyer, the *savoir faire* is indispensable; and all the higher faculties are necessary to him.

In all the constructive arts, No. 7. will be found conspicuous; and the goodness of a mechanic's work will be in proportion to his intelligence in his particular department, whether order, form, colouring, &c. be chiefly required in the business he pursues.

Many young men are sent on trial to engravers and other artists, and are found incapable of making any progress; while others, on the very first attempt, shew great natural aptitude, and become adepts in the art they have chosen to profess, almost without an effort. In the for-

mer, 7. will be found in every instance small, and in the latter large. If 16. be large also, the individual will rise into the higher walks of his profession. If 33. be large, and 16. small, his successful efforts will be confined to copying nature, or whatever may be set before him. If 7. and 20. alone be large, he will be a mere mechanic.

In short, to put Phrenology to the test, the student ought to frequent workshops, bridewells, prisons, mad-houses, and every place where certain organs may be expected to be seen in large proportion, and character determined. The existence of the system depends on facts alone; and although it cannot yet be said to be perfect, it is in that state of forwardness, that we may soon expect a rapid approach to its establishment as a science.

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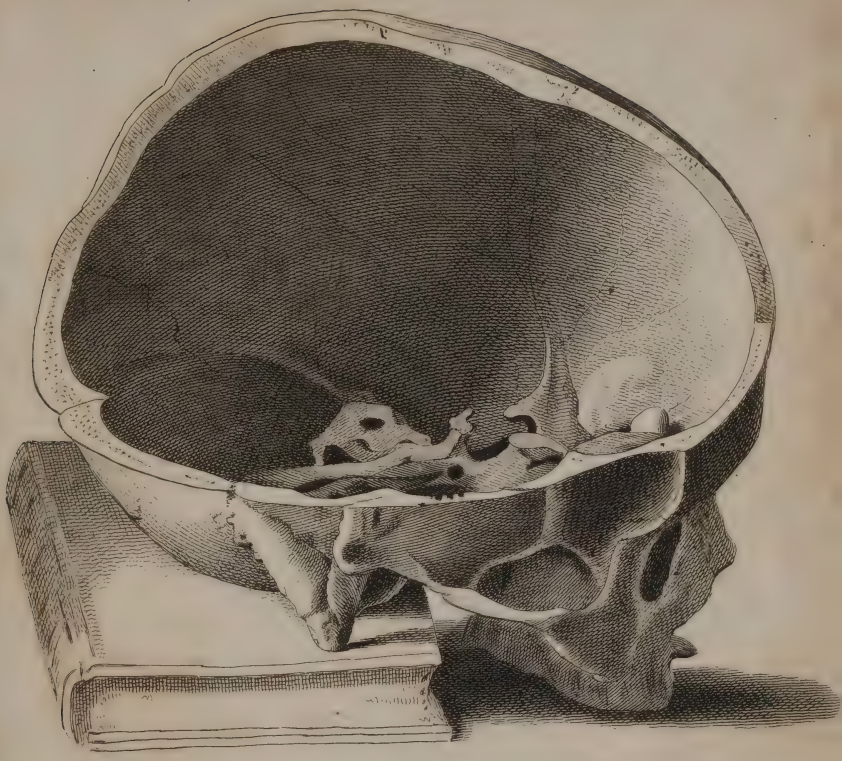
Fig. 1.



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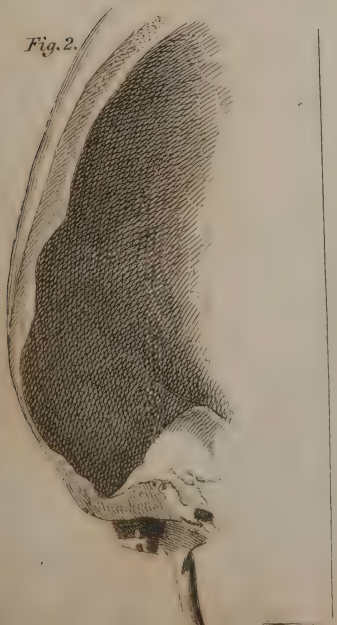

Fig. 3.

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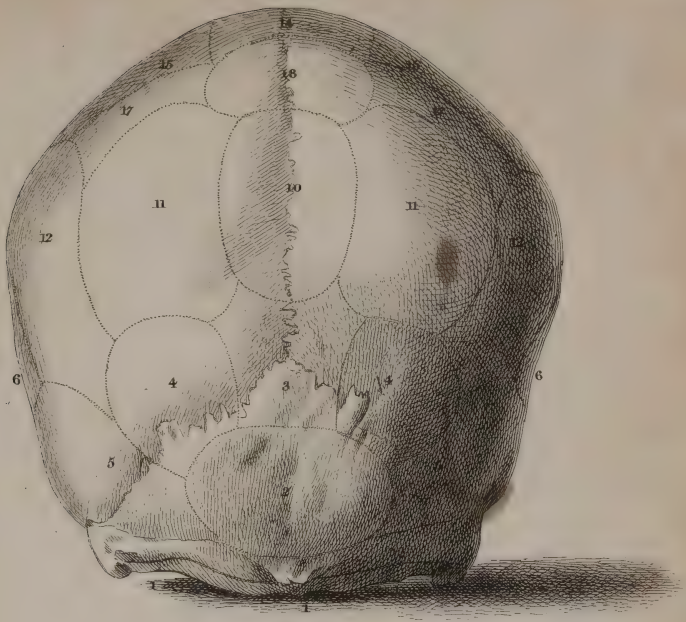

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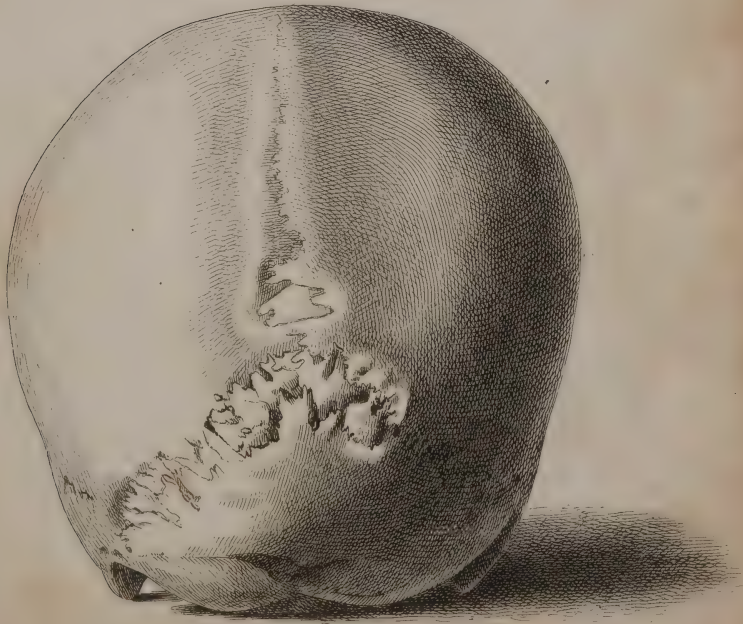

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Fig. 1.

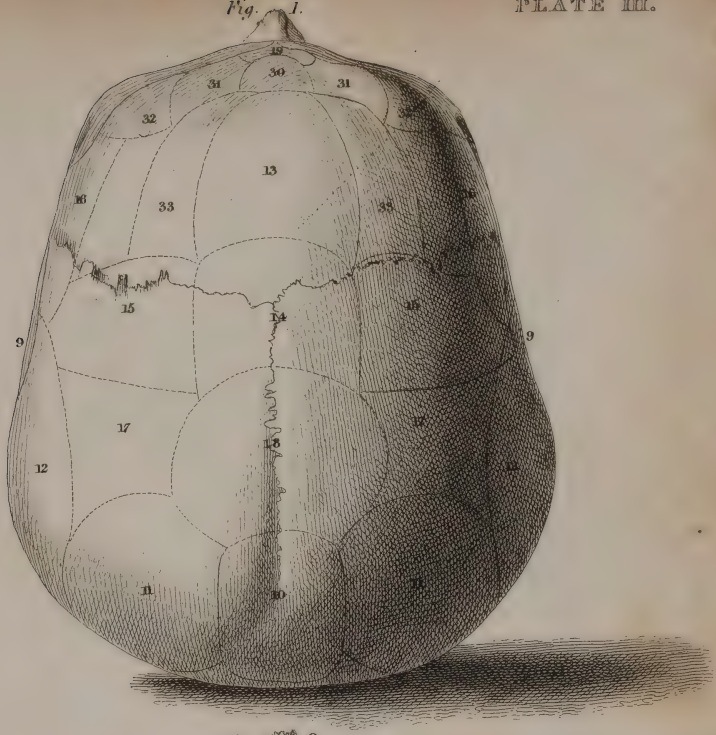
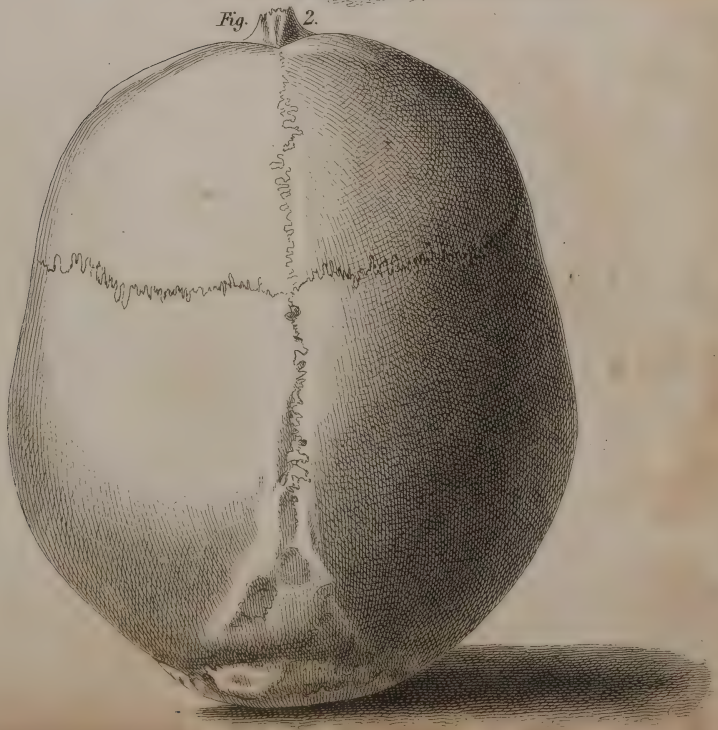


Fig. 2.



Drawn & Engraved for Will. Lewis

Fig.1.

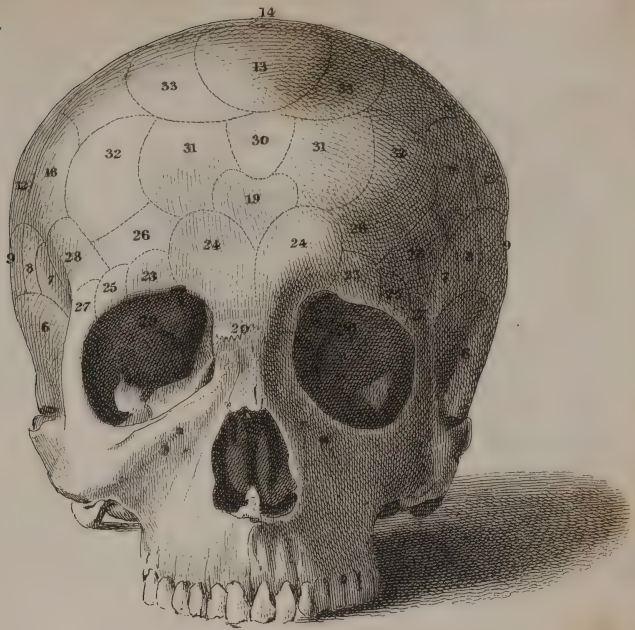
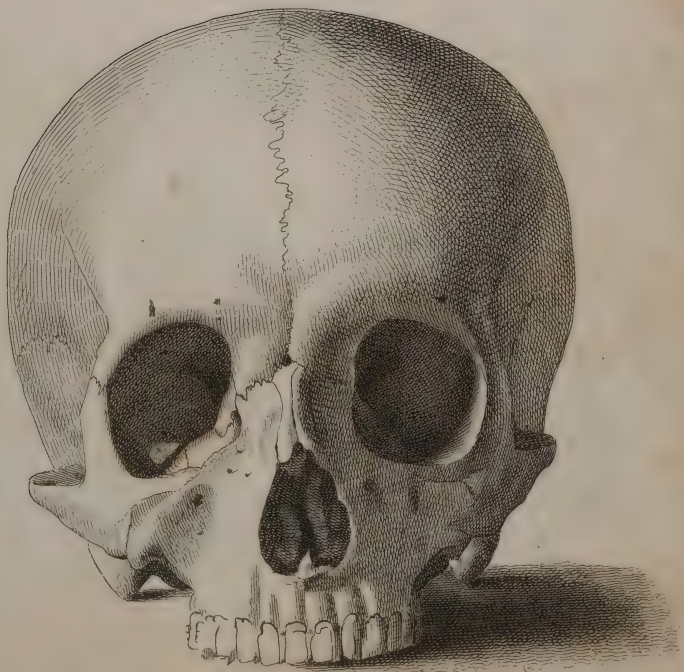


Fig.2



Drawn & Engraved by W.H.Lizars.

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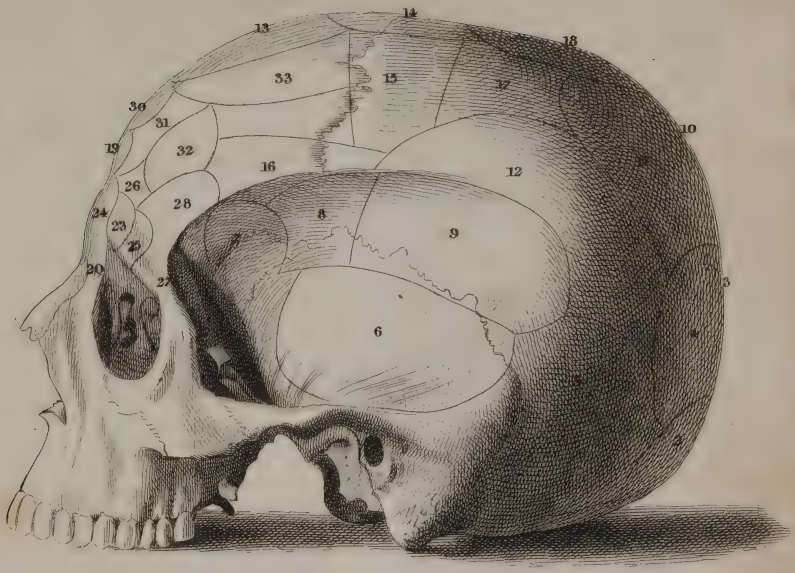
Fig. 1.



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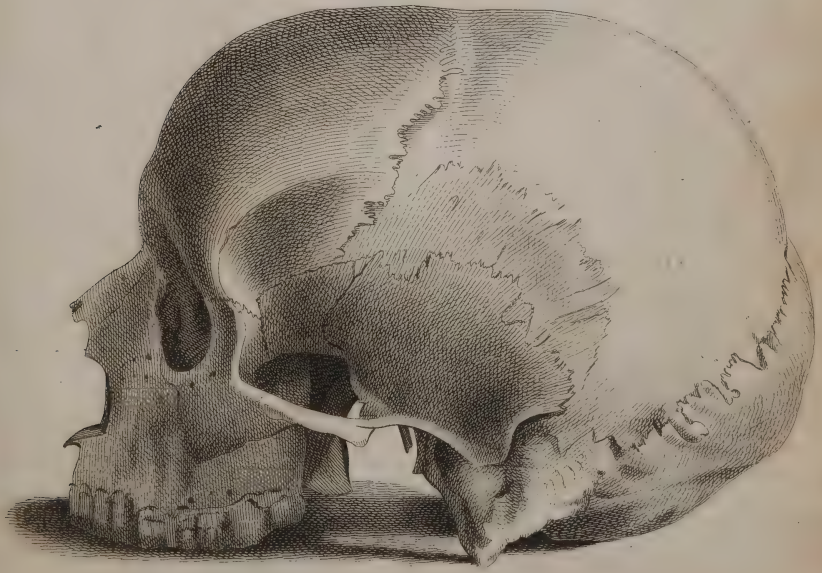

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Fig. 1.

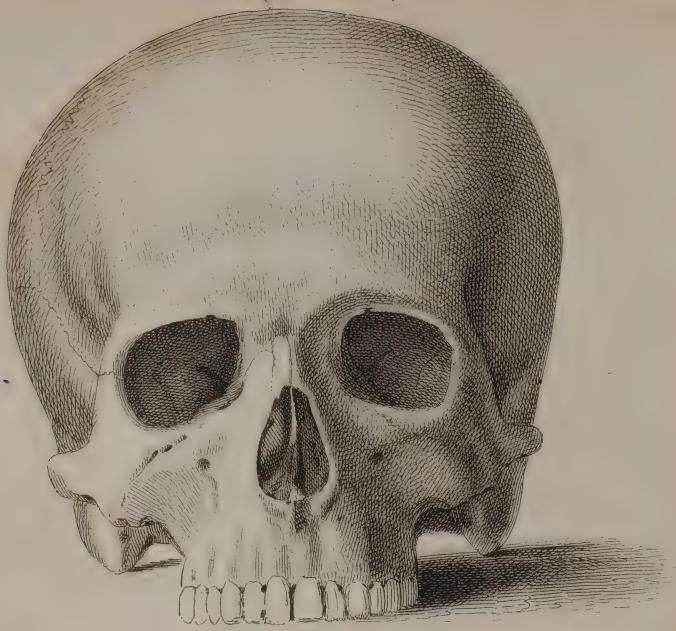

Fig. 2.

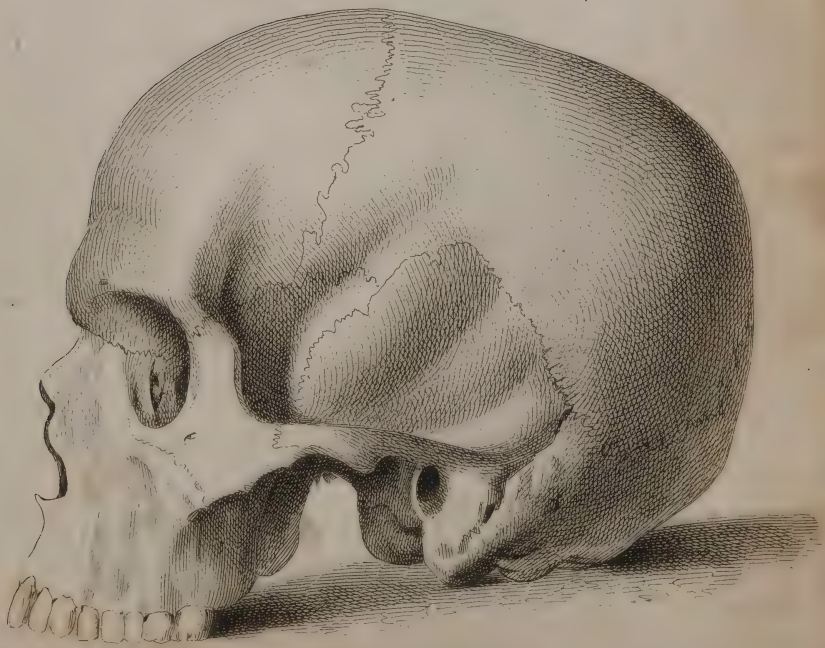

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Fig. 1.

Fig. 2.

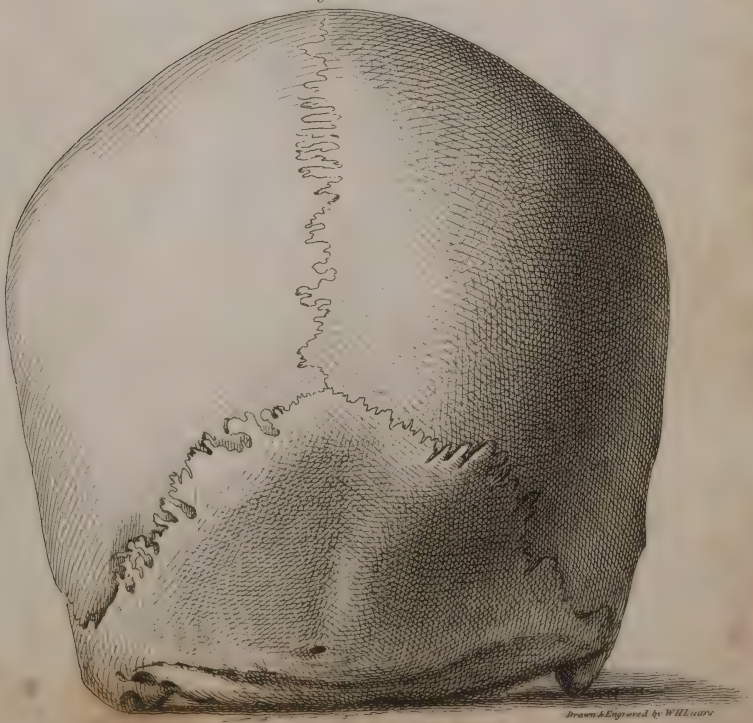

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Fig. 1.

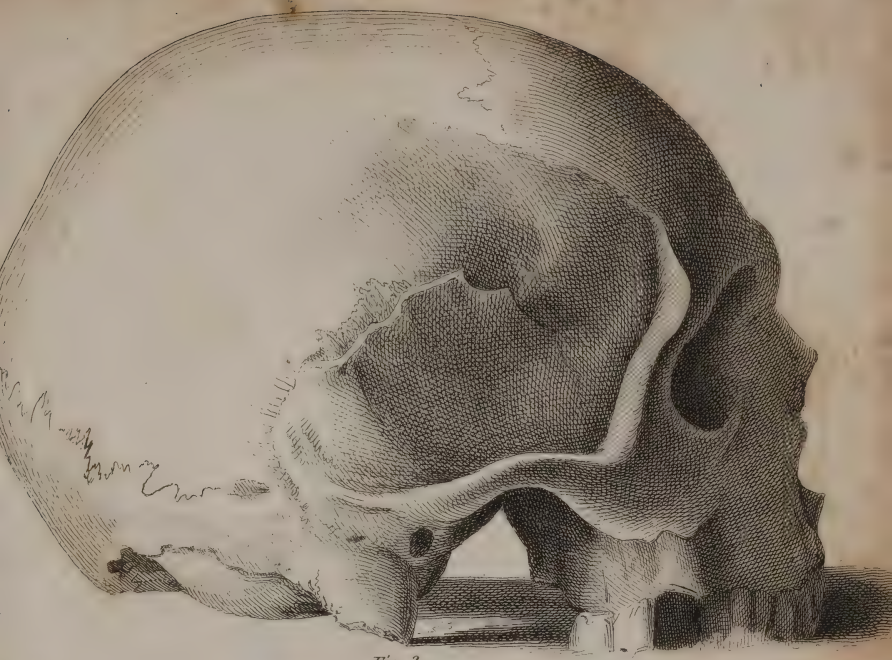

Fig. 2.

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PLATE XI.

Drawn & Engraved by W.E.Lizars

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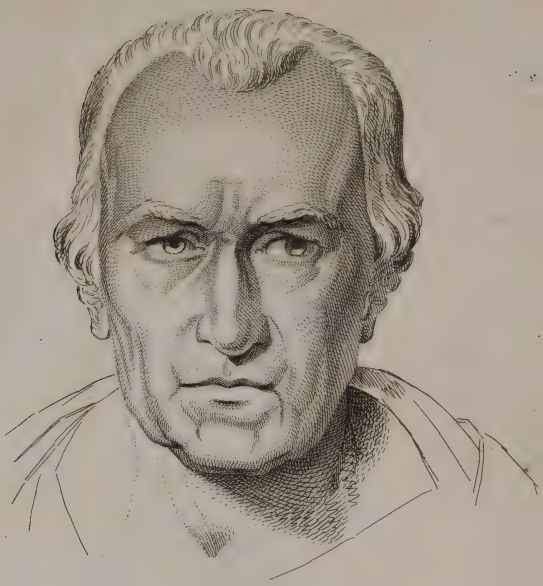
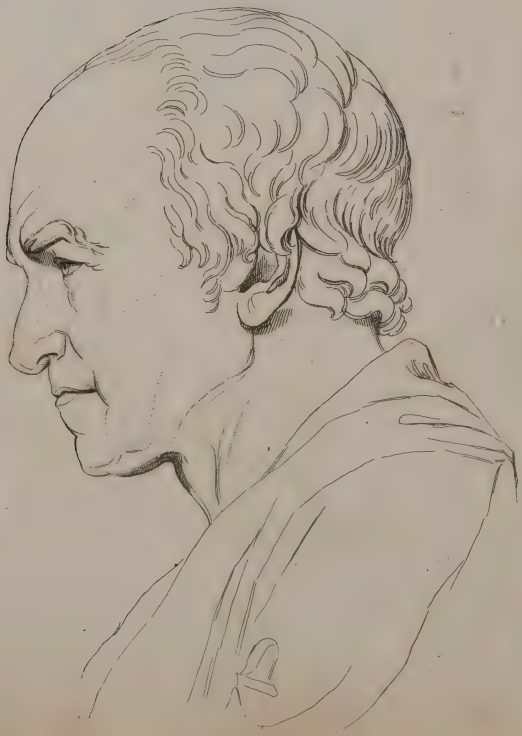
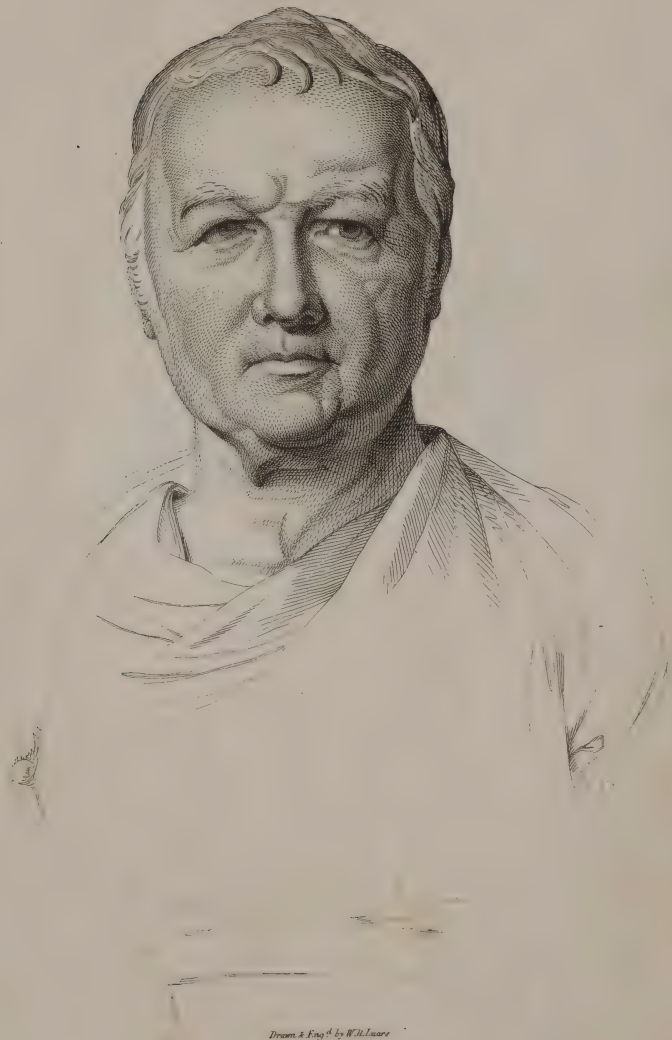




Drawn & Engraved by Wilkinson



Drawn & Engd by W.H. Lizars

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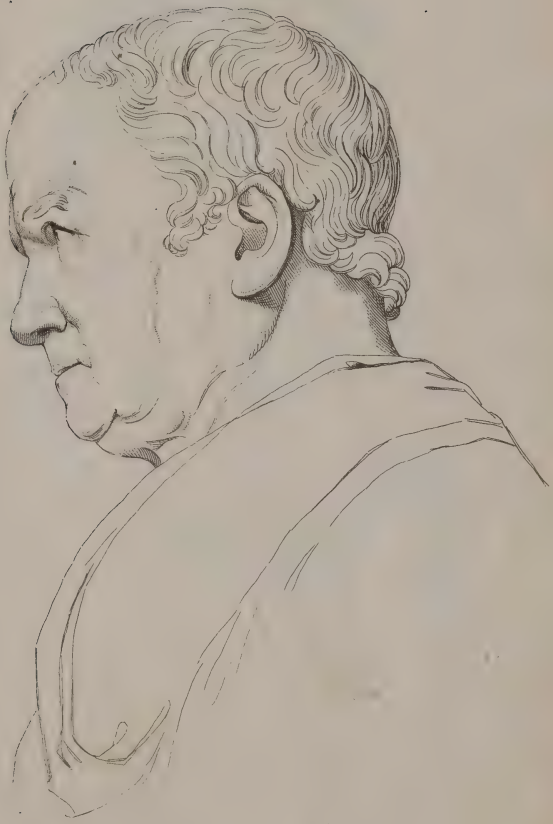

Drawn & Engraved by Williams

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Drawn & Engraved by W.H.Lizars

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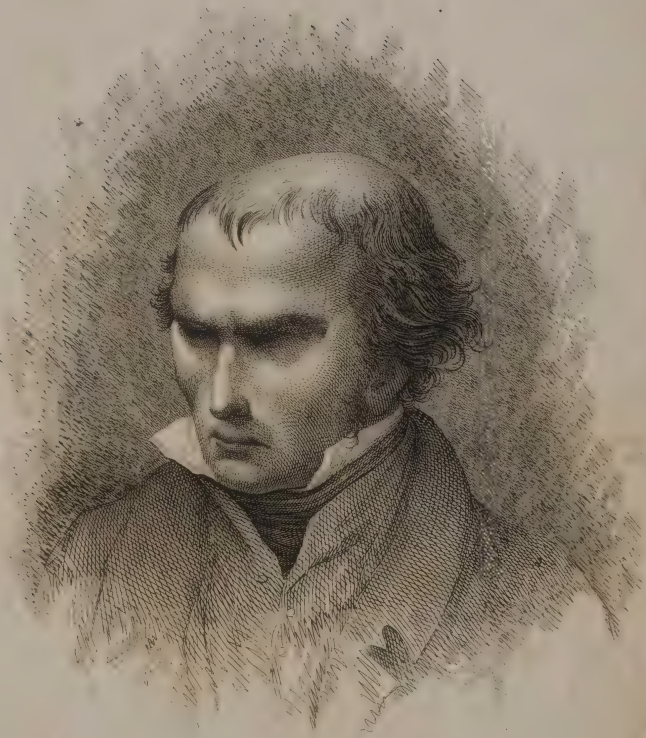
PLATE XVI.



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